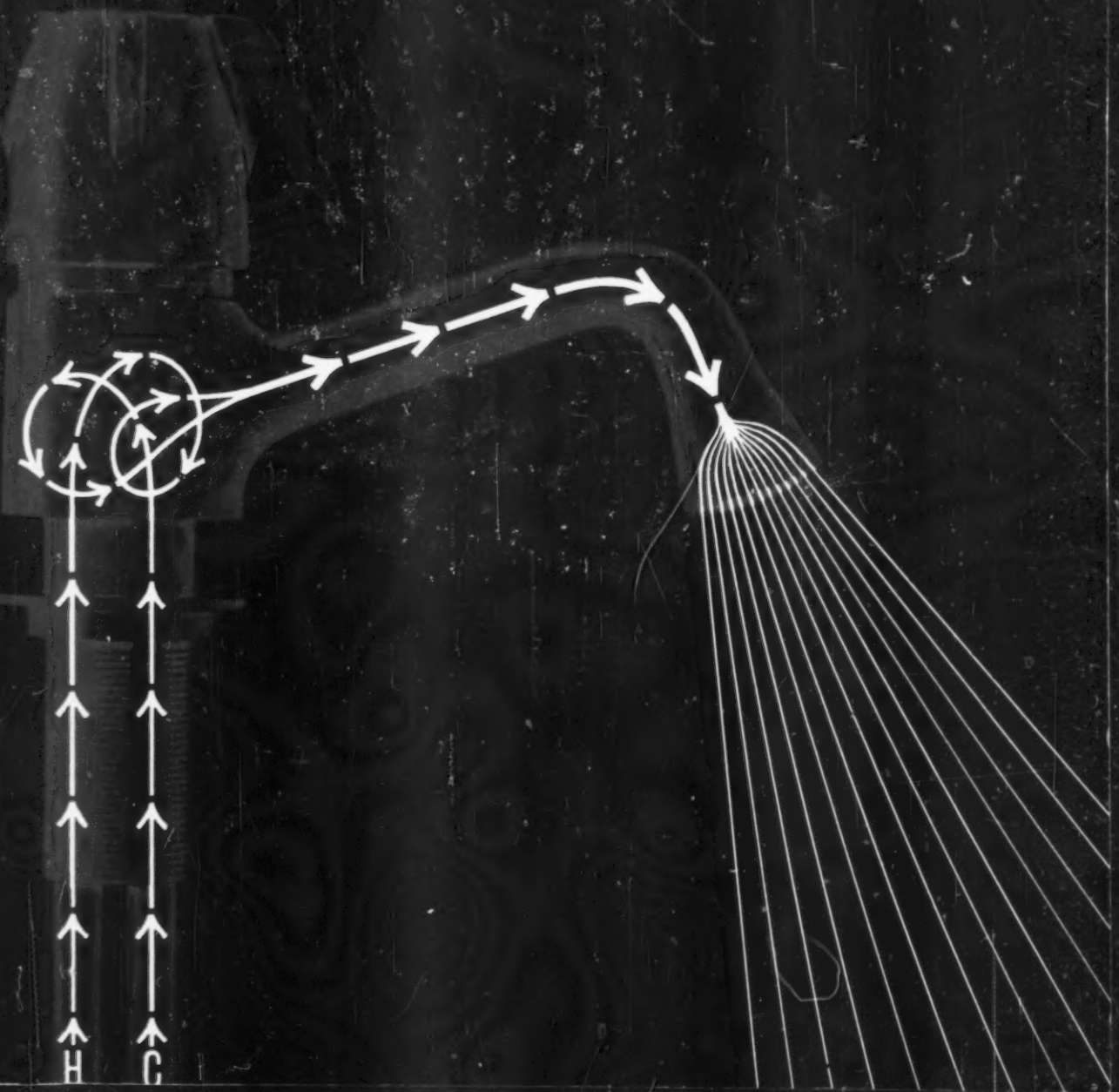
Design

Council of Industrial Design 145 January 1961 Price 3s



"Palette" designed by William Gear. M 1068 shown to scale.

A new collection of machine printed wallpapers has just been compiled by the London Office of
The Wall Paper Manufacturers Limited 19/21 Mortimer Street, W.1.
and is now available through wallpaper suppliers. Many prominent designers are associated with this collection
among them Lucienne Day, Jacqueline Groag, Terence Conran, Joyce Storey and William Gear.
Modus wallpapers, because machine printed, are moderate in price,
and in order to increase their usefulness to Architects and Interior Designers
all these papers have been treated with a special protective coating.
YOU ARE INVITED TO VISIT THE EXHIBITION OF THESE WALLPAPERS AT
MORTIMER STREET (FIRST FLOOR)

WPM

MODUS

19/21 MORTIMER STREET LONDON W1

PROFILE OF A CREATIVE MIND

Potter

Josiah Wedgwood (1730-1795) has been described as the first potter to have combined good design with industrial processes. Wedgwood's cream-coloured earthenware was the forerunner of all good tableware while his Jasperware is a Connoisseur's delight.

Wedgwood's mental powers and artistic perception were far in advance of his time. He had a love for original experiment which was not always appreciated or welcomed by his conservative rivals. Wherever possible, Wedgwood applied his cultivated taste for ornamental art in an endeavour to modify the crude, if decorative, treatment that characterised English potteries of the 18th Century. Though he may have lost the individuality of the rougher pottery, Wedgwood replaced it with beauty and utility — lids fitted, spouts poured, handles could be used. It is said that Wedgwood was a mere employer of artists who translated their designs into clay, but he was more. He could adapt and invent, faculties which revealed themselves in new materials and methods, and the origination of new forms.

In I.C.I., creative minds are constantly searching for new products and processes, and for improvements to existing ones.

ICI

The Abbess LINEAR Series.

This versatile series of desking offers considerable scope to office planners. Illustrated above is a double work-station, easily assembled from standard Linear units.

OFFICE Abbess EQUIPMENT

More details of these and alternative models from appointed Abbess distributors or direct from the sole manufacturers

Abbott Bros (Southall) Ltd.,
Abbess Works, Southall, Middx.
Telephone: SOUthall 1357
Cables: Abbess, Southall

"Twitterton!
Is this really

FORMICA*?"

Certainly . . . these are Formica Cellulose Acetate Containers. Time was when Formica Ltd. were known only for hard-wearing surfaces, found mainly in kitchens. Not so any more. Now they make all kinds of different things for all kinds of different needs. And all kinds of people are talking about them.

Consider these containers, for instance. What wonderful gleaming smoothness! Transparent, seamless, non-toxic, tough as only Formica know how, they come in a variety of shapes and sizes, with snap-on or screw-on tops. You'll see them around. Perfect shop windows in miniature . . . for everything from cosmetics to cocktail sticks, bow-ties to shaving brushes.

This is just one of the many products bearing the name Formica. The list below gives you some idea of the *extent* of the Formica range.

FORMICA make

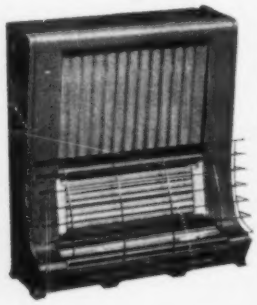
DECORATIVE LAMINATES
INDUSTRIAL LAMINATES
CHAIR SETS
EXTRUDED PLASTICS

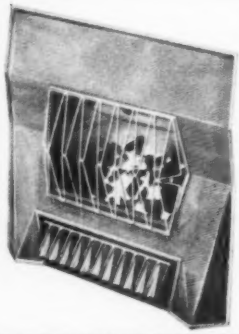
For full information on any FORMICA product please write to:

FORMICA LIMITED, Extruded Plastics Division,
Cavendish Works, Buckhold Road, Wandsworth, S.W.18. Tel: VANdyke 7202

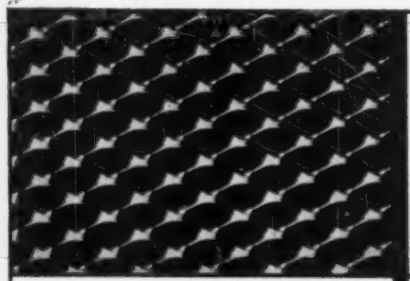
* FORMICA *is a registered trade mark*

LOOK AROUND YOU . . .

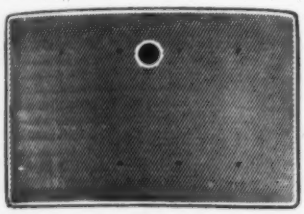




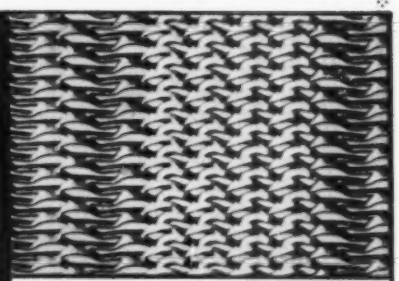
you'll see more manufacturers of heating appliances use Expanded Metal than any other alternative grill... and for many good reasons . . .



BETTER CONDUCTION
Expanded Metal, completely jointless, in steel or aluminium conducts evenly — allows uniform airflow. Ridged or flattened, there's a mesh for every application.



FASTER PRODUCTION
Expanded Metal is easily prepunched and formed. Its introduction simplifies fabrication and speeds output. Special sizes can be cut and supplied in quantity.



WIDER CHOICE Expanded Metal offers the strength and economy of steel or the colours and patterns of anodised aluminium. It opens up new opportunities for styling and sales.

Write for full details today

EXPANDED METAL

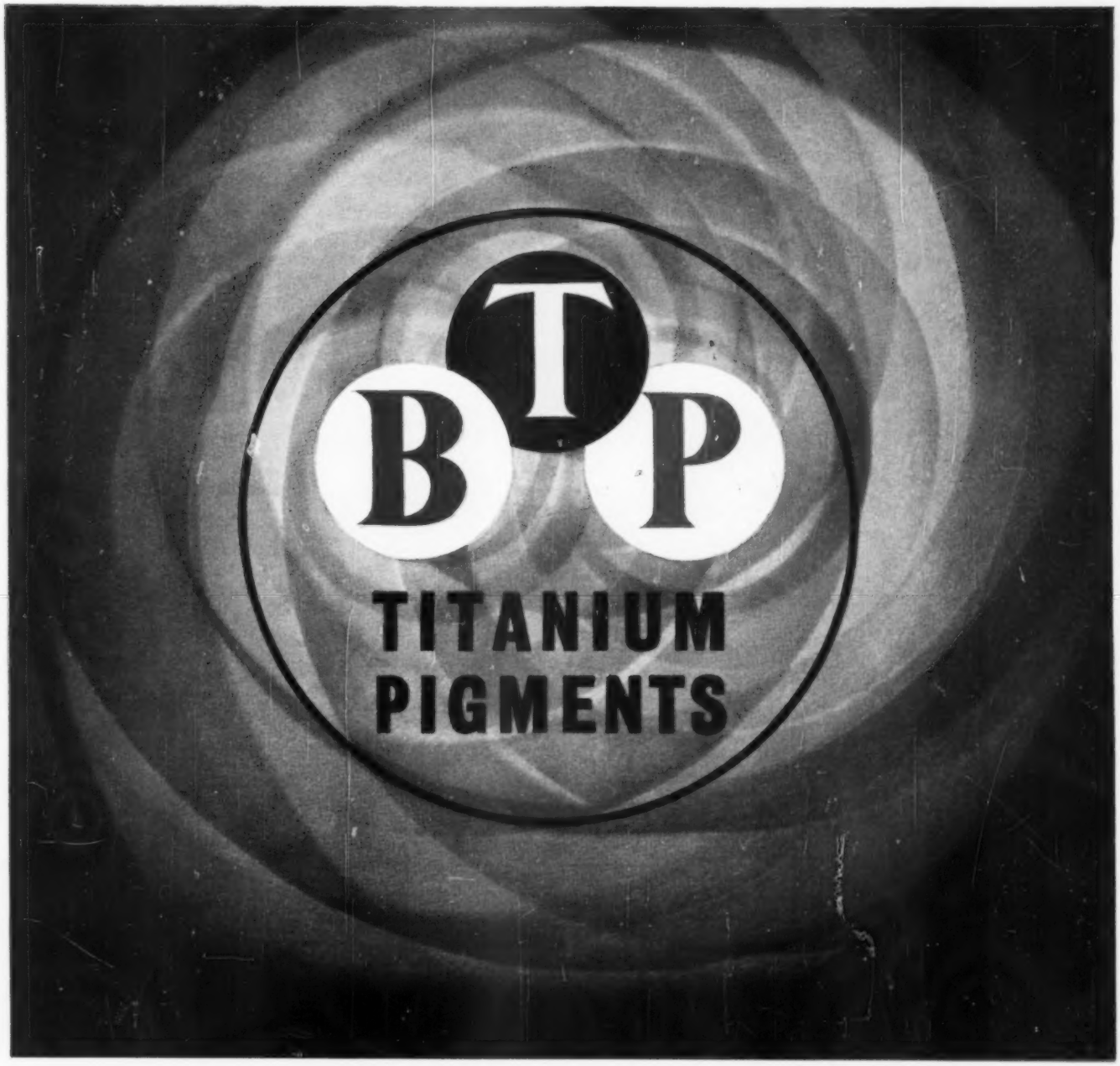
at the heart of more things than most people realise

THE EXPANDED METAL CO. LTD., 16 Caxton Street, London, S.W.1. Phone: ABBey 7766.

Expamet

Also at: Aberdeen · Belfast · Birmingham · Cardiff · Dublin · Exeter · Glasgow · Leeds · Manchester · West Hartlepool.

The Expanded Metal Company of Canada Limited, Annacis Industrial Estate, Vancouver, Canada. *Agents and Stockists throughout the free world.*



TIOXIDE pigments for brilliant whites and beautiful tints.

British Titan Products Company Limited is today the largest producer of titanium pigments in Europe. From the very beginning research and development have played a major part in the activities of the Company. This emphasis on technical advance has produced a range of titanium pigments designed to meet the many and varied requirements of the colour-using industries. B.T.P. Titanium Pigments are incomparable as whitening, brightening or opacifying agents economically adding eye-appeal and brilliance to Plastics, Paper, Textiles, Rubber, Leather, Vitreous Enamelling and Paint. For maximum benefits from B.T.P. Titanium Pigments our Technical Sales Service Department will be pleased to supply additional technical information and samples on request.

British Titan Products Company Limited

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...GLASS packing actively SELLS goods!

Products packed in glass start with a definite advantage. The housewife trusts glass to protect perfectly, and not to affect the quality of the goods she buys. Glass lets her see for herself exactly what she's buying. It is because glass itself is so attractive, so clean and sparkling, that it gives just that look of extra quality that swings the sale in its favour. Something new and interesting is always happening in the lively glass container industry. Your Glass Manufacturer will be happy to discuss current developments with you.

Prove it with a Practical Test on your own Products

Use the Glass Container-Acceptance Testing Service to test consumer reaction to new pack designs *before* they go into mass production. This *free* service enables you to test packs in any, or all, of the following progressive stages:

DESIGN PREFERENCE TESTING Any new design can be tested on a consumer panel of 400 families.

CONTAINER IN USE TESTING The new container and its product can be tried out in actual use in the home.

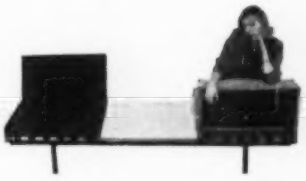
SHELF TESTING The sales appeal of a new container can be tested under actual retail store conditions.

Full details of this service are contained in a booklet available upon request from your Glass Manufacturer or from the Federation.

GLASS

See how good things are in GLASS

THIS IS AN ADVERTISEMENT OF THE GLASS MANUFACTURERS' FEDERATION · 19 PORTLAND PLACE · LONDON W1 · TELEPHONE : LANGHAM 6052



DEXTROUS NEW DESIGNS BY ROBIN DAY—furniture of infinite variation and comfortable practicability. On black steel frames of three lengths, rest combinations of chair units (backs attached and with or without arms), seats units, table tops and cabinets. Combine them as you please. Cushions are all resilient foam, zipped into covers of many exclusive Hille fabrics. Strong rubber webbing supports the seats, back cushions rest against black backs. Square section steel legs have floor-protecting plastic feet. Table tops are timbered or plastic faced. The cabinet houses bottles and glasses or what-you-will. See Robin Day's New Form Group soon. Visit our showrooms, 39/40 Albemarle Street, London, W.1, Hyde Park 9576, or 24 Albert Street, Birmingham 4, Midland 7378, or write for brochure and stockist directions.

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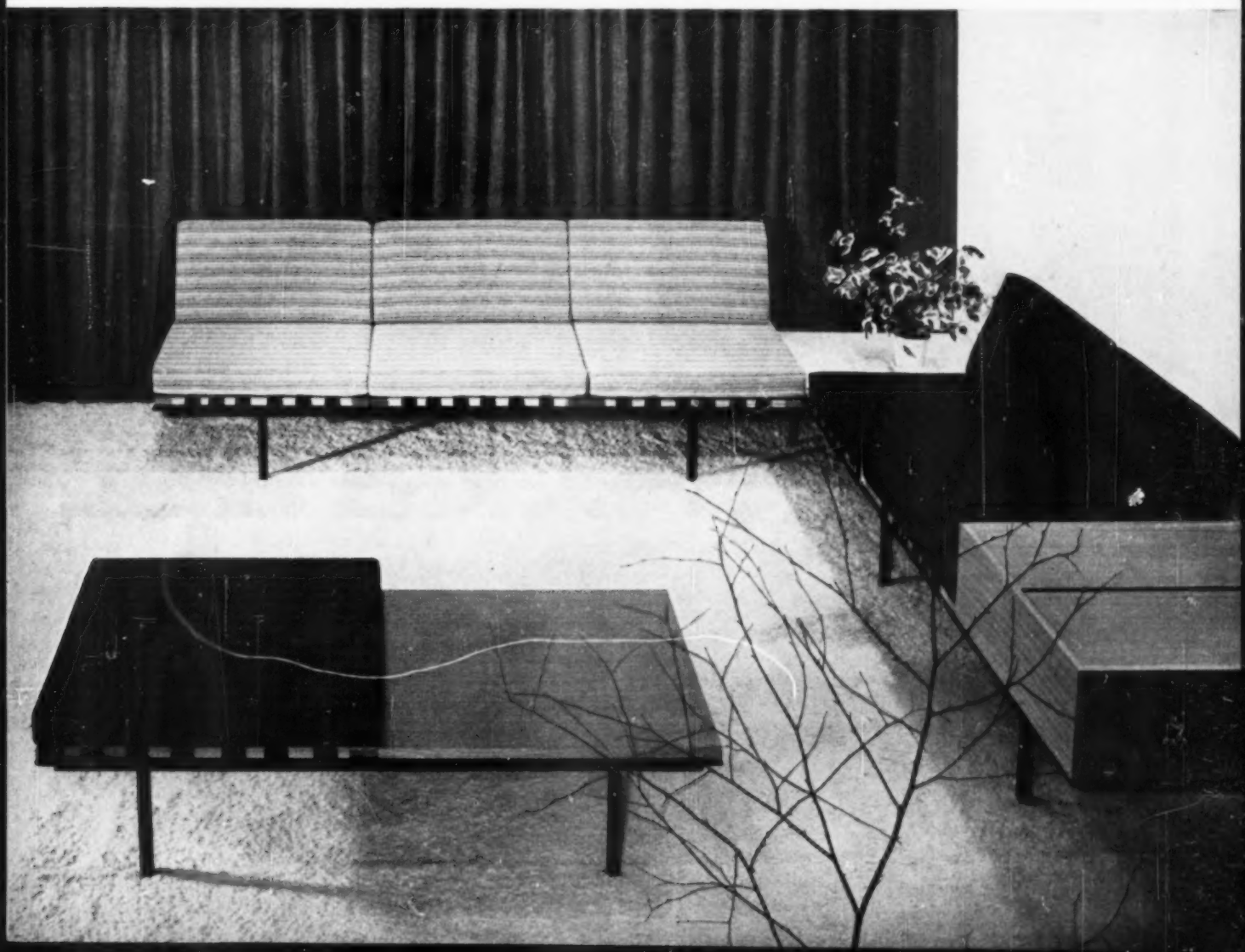
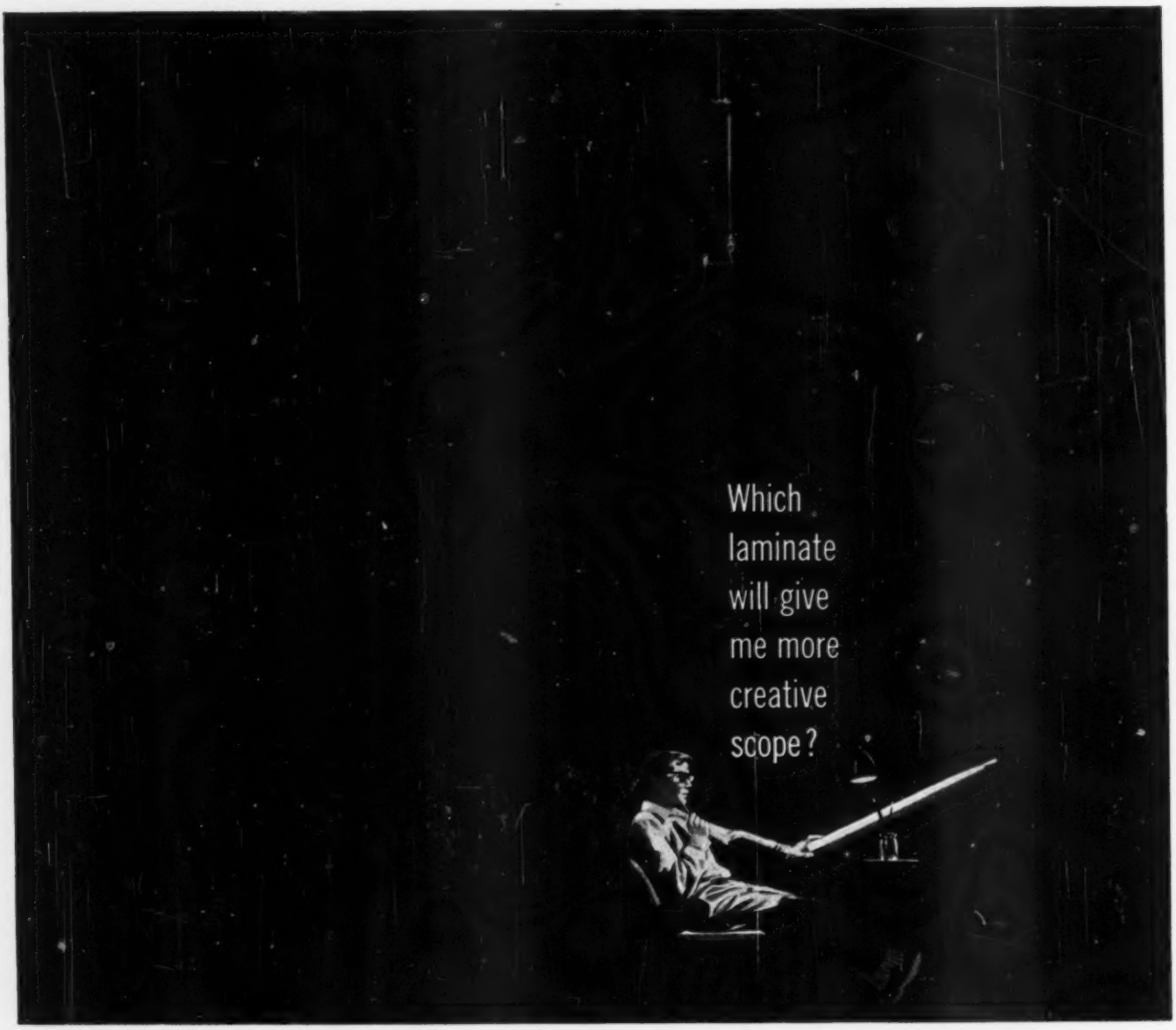
CONTRACT DIVISION

Internationally-honoured furniture for homes and offices





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THE LIFETIME LAMINATE

FABLONITE is the new *top-quality* laminate that introduces over 70 new and exclusive stylings. There are 13 exceptionally realistic wood grains (their unique long 'repeats' defy detection!) . . . 18 pure plain colours . . . hosts of colourful patterns. The glorious 'Harmony' stylings (combining two or more effects in one distinctive panel) give individuality to built-ins and make interesting focal points. FABLONITE *costs less to use* — list price is only 3/9 per square foot in the standard range (including wood grains). *Planned nation-wide distribution* ensures that you get the FABLONITE you want, *where and when you want it*. No costly hold-ups . . . no last-minute changes of plan!

The Fablon Building Division is ready to assist you with technical information. For details of prices, stylings and specifications, post the coupon today, to FABLON LTD., 49 PARK LANE, LONDON, W.1.

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To: FABLON LIMITED · 49 Park Lane · London W1

Please supply details of FABLONITE prices, stylings and specifications. ☐

Please arrange for a FABLONITE consultant to call by appointment. ☐
(TICK WHERE APPLICABLE)

NAME.....

ADDRESS.....

D.1

The ceiling that lights

A Lumenated Module installation in the showroom of Middlesex Motors, Stanmore. ARCHITECTS: *Tubbs, Duncan & Osborn,* A.R.I.B.A.

Lumenated Ceilings are precision made. They arrive on site ready for immediate erection — using a minimum of skilled labour. They are covered by a comprehensive guarantee and a full maintenance service is provided. Expert co-operation on design and installation can be given by our experienced staff. Most Lumenated Ceilings diffuser designs have been accepted by the Council of Industrial Design. Please write for full details.

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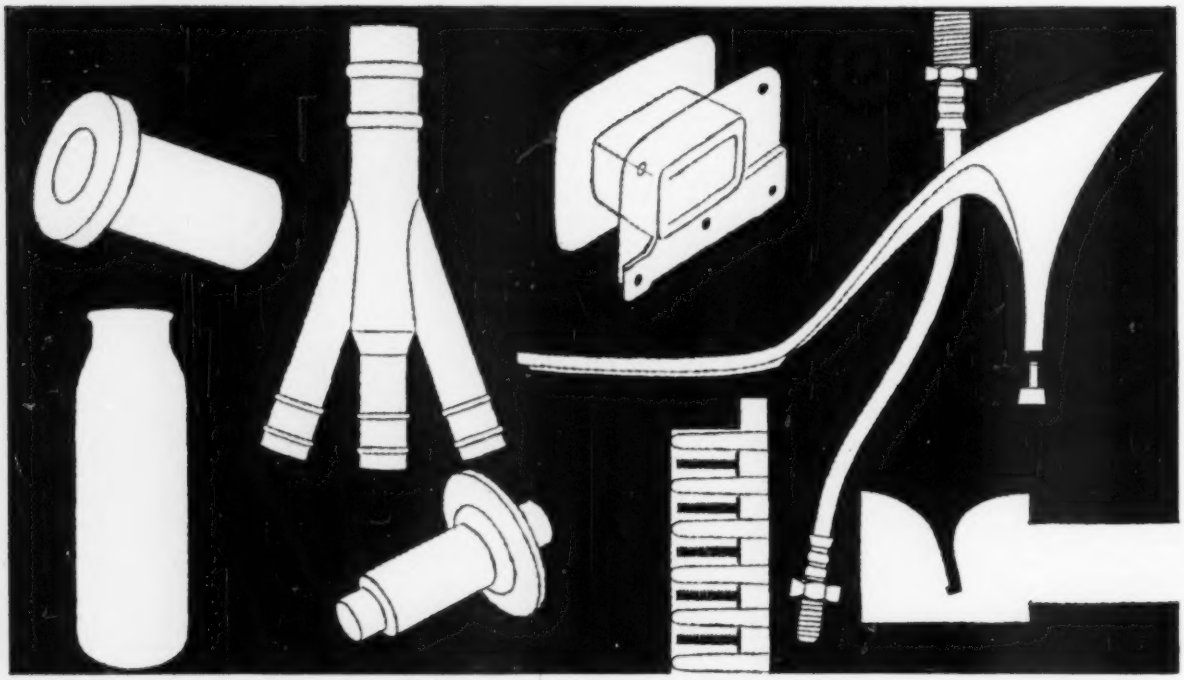
TGA 181

Ralsin
REGISTERED TRADE MARK

the remarkable —



in any of a hundred different forms!

Every day, a designer somewhere is giving a new shape, a novel purpose to this incredible polyamide, RALSIN!

RALSIN is light in weight, mechanically tough, shock resistant, non-absorbent and superbly stable. It is all these things in whatever shape it has been machined or moulded, extruded or sprayed . . .

Gears, straight and conical, bottles unbreakable, pipes near unburstable, coatings unflakeable, packages most printable — such are the forms of RALSIN, the basic material for whatever end you have in mind.

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WHIFFEN & SONS LIMITED

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Whiffen & Sons Ltd. are sole agents for Ralsin in the U.K., Canada, Australia and New Zealand.

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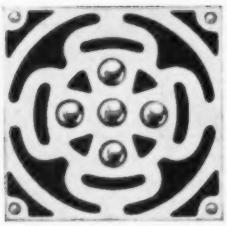
W79

DECORATIVE SCREENING

for the modern interior

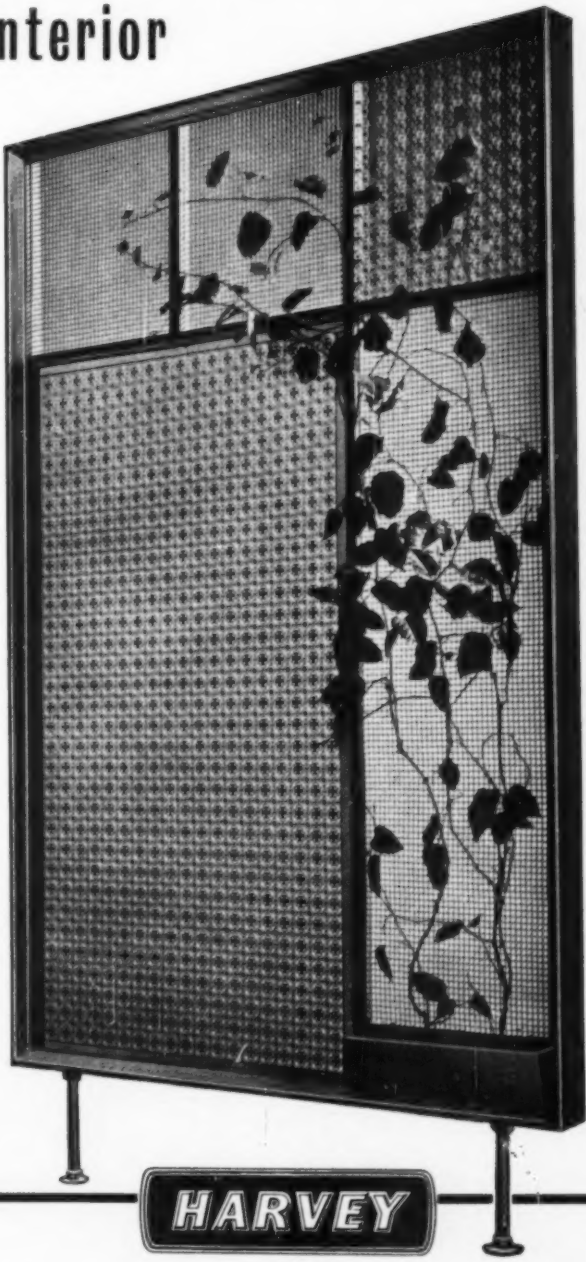


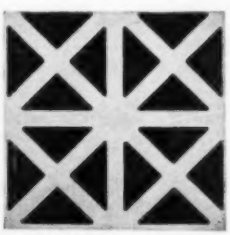
This elegant room divider is a striking example of the use of Harvey perforated metal and plastic coated wirework. As shown in the ¼ size illustration on the left, pattern No. 1642 is a combination of perforation and embossing, and is one of thousands of patterns for which Harveys hold dies. Four other examples are shown below, also ¼ size.

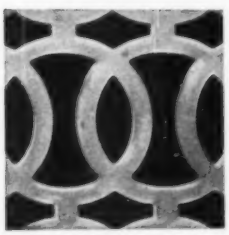
Small, medium or large scale panels can be produced in most metals and in various gauges. Certain patterns can also be produced in plastics and other materials.

Harvey Decorative Metalwork can be finished to produce the maximum appeal and to ensure prolonged service. It may be stove enamelled in colour, plated, oxidised, anodised, polished and lacquered, or plastic coated.

FULL TECHNICAL SERVICE is offered to designers contemplating new applications of these materials.







HARVEY

DECORATIVE METALWORK

G. A. HARVEY & CO. (LONDON) LTD., WOOLWICH ROAD, LONDON, S.E.7. GREenwich 3232 (22 lines)

Also available : HARVEY Patent Metalace and Woven Ribbon Wirework in many attractive patterns and finishes. P/11

It can be done... ✻ and Wardles have done it!

THE VINYL COATED

BREATHABLE *fabric*

FOR UPHOLSTERED FURNITURE

It looks like natural cloth
It feels like natural cloth
It trims like natural cloth
It breathes like natural cloth

Yes, a *breathable* vinyl fabric, with all the advantages of a moquette or tapestry combined with the benefits of vinyl coating. That's **ÆROFLEX** — the new fabric from Wardles.

It's a grade A fabric but it's priced in the grade B range.

Important new development?

Indeed it is. Send for samples or prototype length quickly. Be the first to use **ÆROFLEX**.

ÆROFLEX

Write right now for full range to:—
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this is INFINILITE...

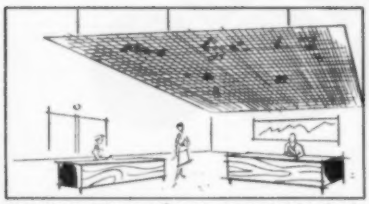
the world's first non-modular suspended ceiling

lightweight sections interlock without visible joints

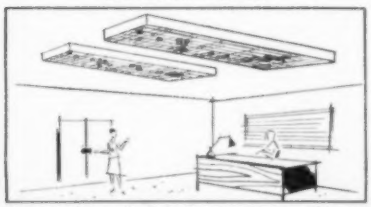
Consider the architectural possibilities of a luminous ceiling material that cuts to any size and shape, that is dimensionally stable, yet so light that it is suspended only by slender wires. This is Infinilite. Its light transmission value is one of the highest of any luminous ceiling material, yet brightness control rings ensure remarkably low surface brightness.

Infinilite comes in standard 24" x 25" interlocking panels that clip together to form ceiling areas of any size.

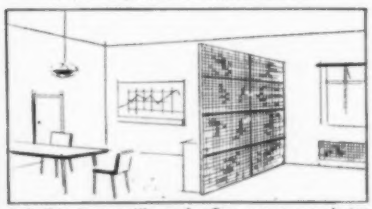
Investigate Infinilite — luminous ceiling — room divider — decorative material — and in imaginative hands much more besides.



Infinilite weighs so little, it is suspended by slender wires only. No T beams.



Infinilite has a high light transmission value yet surface brightness is exceptionally low.



Infinilite is versatile and offers numerous design and decorative possibilities.

INFINILITE

the revolutionary new suspended **ceiling**

G.E.C.
LIGHTING DIVISION

THE GENERAL ELECTRIC CO. LTD.,
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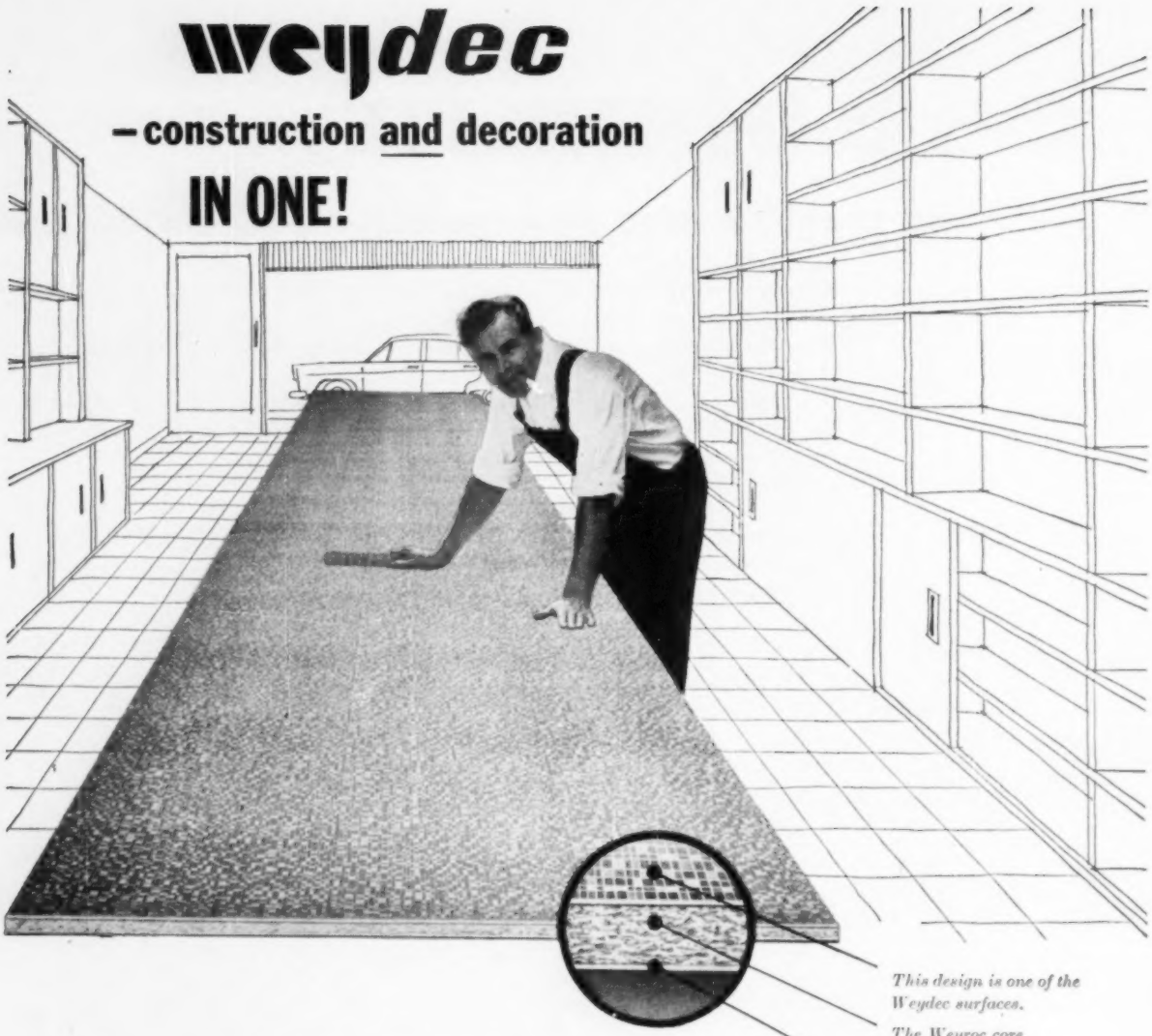
weydec

—construction and decoration IN ONE!



This design is one of the Weydec surfaces.

The Weyroc core ($\frac{1}{2}$" or $\frac{3}{4}$" nominal).

Non-decorative plastic balancer on reverse face.

No wonder Architects, Shop-Fitters and Builders are so enthusiastic about using WEYDEC. These cost-cutting boards—with their colourful plastic surface *factory-bonded* to a core of famous Weyroc wood chipboard—are constructional *and* decorative *at one and the same time!* A ready-bonded plastic-surfaced material like this costs less than buying the board and surface separately, so WEYDEC saves money. And, by doing away with complicated gluing, WEYDEC saves on time and labour, too. Whatever plastic-surfaced unit you want to specify or make in hard-wearing WEYDEC, you'll find the choice of colours and patterns can be considerably varied outside the standard range. Ask your WEYDEC Distributor for full details—*today!*

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MELAMINE SURFACED WEYROC

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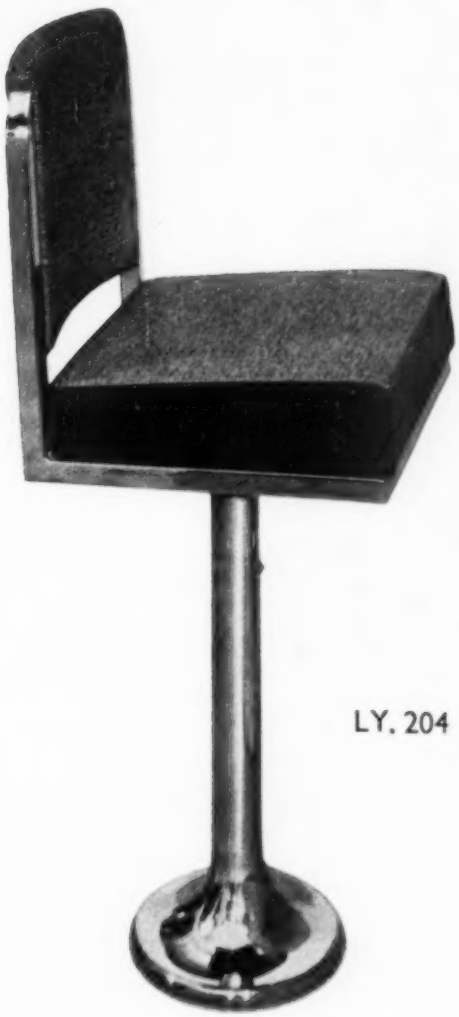
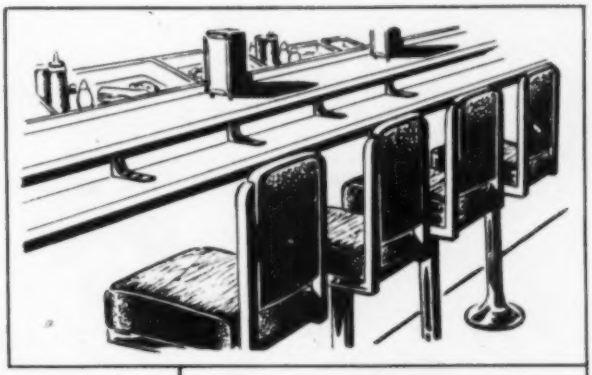
W.P.S.89

du·al

METAL FURNITURE



LY. 204



MP. 63

SM. 62

HT. 118

Free standing or fixed bar seating made to withstand hard wear and easy to clean. A wide range of upholstery and finishes will blend with any decor.

Du-al have the answer to all your seating problems.

DARE - INGLIS PRODUCTS LIMITED

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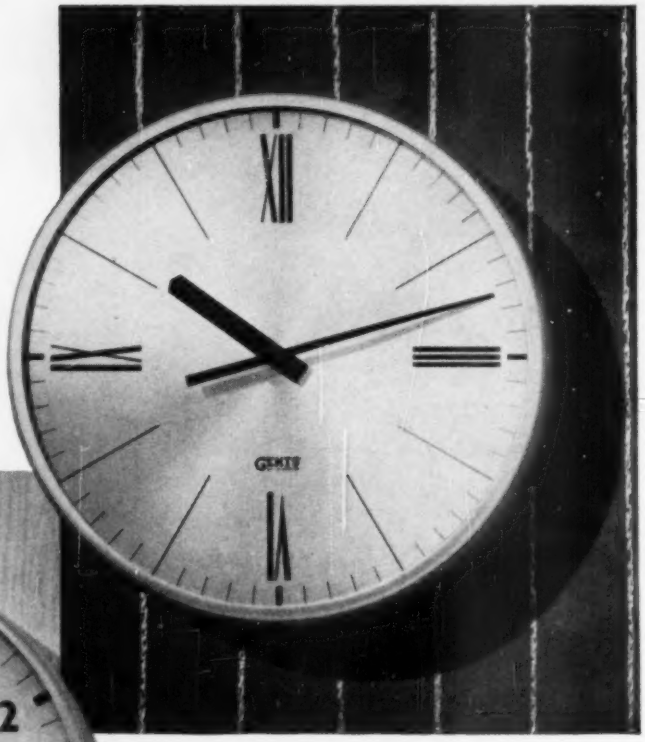
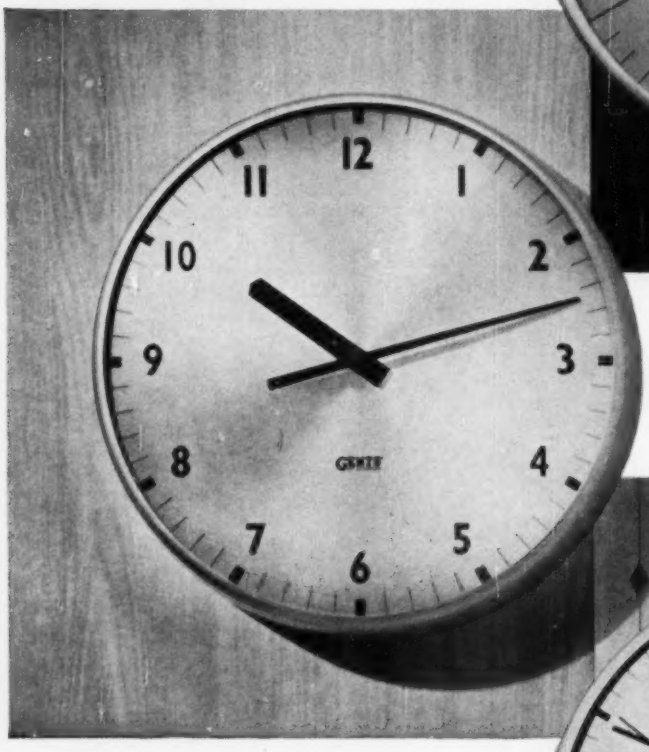
Maximum legibility and good taste are combined in the Gents wall clocks shown here.

Styled by a leading industrial designer they provide a choice of standard models which fit happily into present-day surroundings and décor.

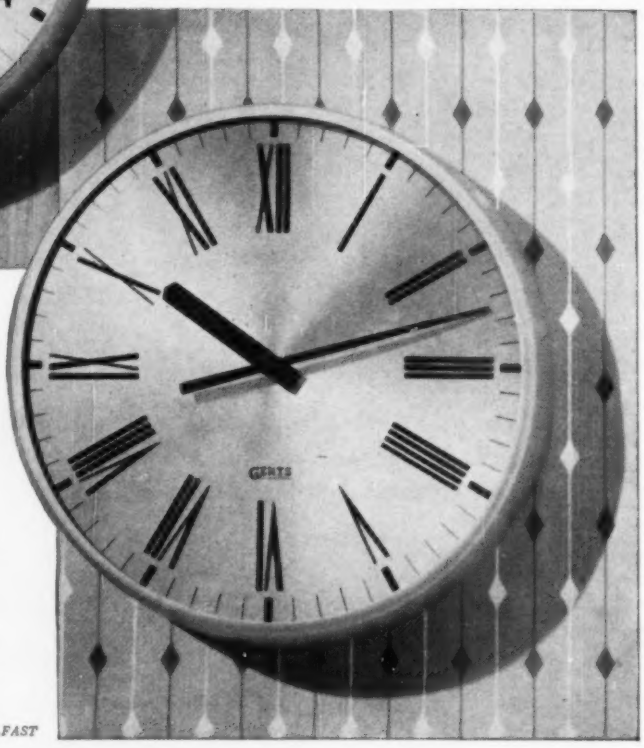
These and others in the extensive Gents range have been selected by the Council of Industrial Design for inclusion in Design Index.

All are available for operating either on A.C. Mains or as part of a Master Clock System.





In every way...Right!



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GENT & COMPANY LIMITED,
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Enter—a breathtaking advance in bathroom luxury

Daring advances in architectural design have found expression in recent years. And now–at last–a single idea heralds a new era in bathroom design.

This bold conception, inspired by Formica Ltd–the VANITORY UNIT–can combine in one space-saving advance, handbasin, taps, dressing table drawers, mirrors, towel rail, strip lighting... beautifully surfaced in the colourful range of Formica decorative laminates... all so easy to keep clean.

With Formica decorative laminates you can design your own Vanitory Units to blend exactly with your overall plan... or you can choose from a wide range already produced by over 40 manufacturers. Full information and lists of manufacturers are freely available on request.

FORMICA* VANITORY* units

FORMICA - THE FINEST OF ALL THE DECORATIVE LAMINATES

FORMICA Ltd, De La Rue House, 84/86 Regent Street, London, W.1.

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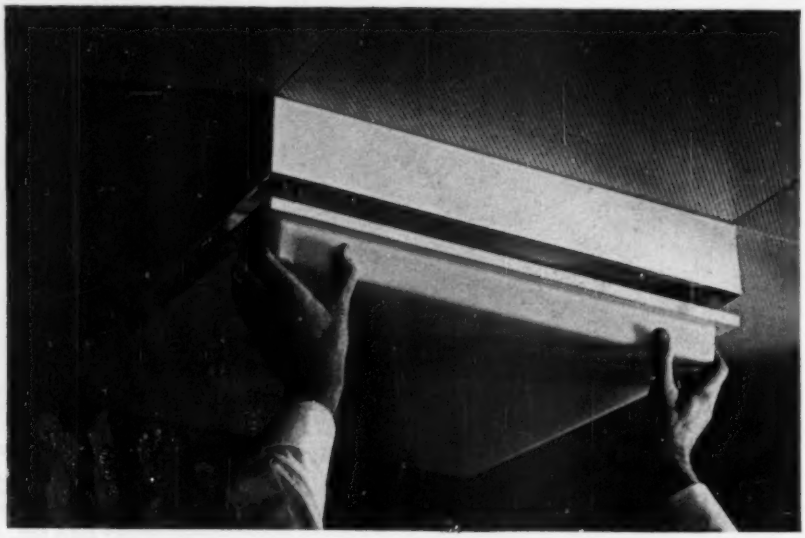
ALLOM HEFFER

AND COMPANY LIMITED

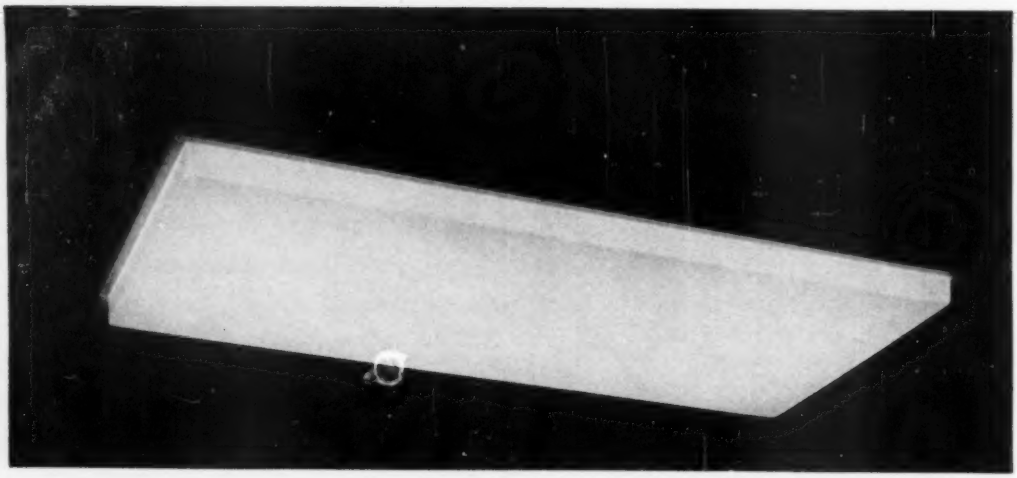


The Modular fittings illustrated made in various sizes are designed for surface mounting where space for recessing is not available.

These fittings incorporate a completely new method of securing simple maintenance by means of the Allom Heffer patent locking device (Patent application No. 32933/59) which provides:

- A positive method of opening and shutting on a pull-push principle.
- Hinging on either side of the fitting when fully clear of the ceiling.
- Complete detachment of the diffuser when required.

Apply for leaflet series 707S



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145 January 1961

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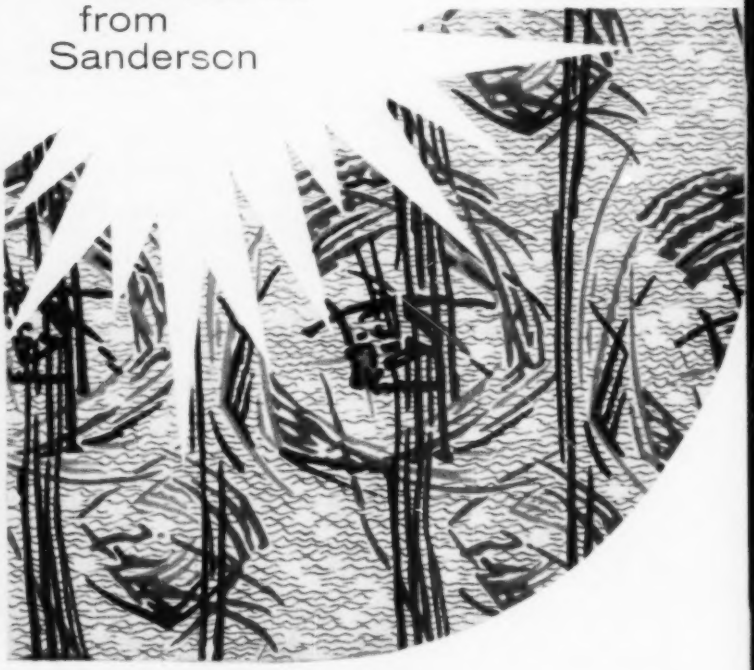
BW 5041/3 *'VIBRATION'* ▲

BW 5060/1 *'PHOENIX'* ▼

Four new fabrics from Sanderson

JE 586/1 *'JAVA'* ▼

JE 558/3 *'IBIZA'* ▲



Here are four more Sanderson fabrics — fresh colours, original designs, deeply textured weaves; displaying every thread to full effect. They come from a new range that has all the traditional Sanderson quality and plenty of variety to choose from. These fabrics are particularly suitable when heavy drapes and upholstery complete an architect's scheme, or for contract furnishing in board rooms, hotels and restaurants. You can see them at any Sanderson showroom.

ARTHUR SANDERSON & SONS LTD., BERNERS ST., W.1. *and in Glasgow, Edinburgh, Leeds, Manchester, Liverpool, Birmingham, Leicester, Exeter, Bristol, Southampton and Brighton.*

Sanderson Fabrics

What price good design?

If a product is manufactured in large quantities it can as easily be designed well as badly. And if a well designed product has to compete with a similar product at the same price which is badly designed, then the well designed product will obviously sell very much better. Since good design means, among other things, suiting the forms to materials and production processes, all this means that the price will be reduced . . .

How often have these arguments been presented (with less scepticism, no doubt) by designers and advocates of good industrial design? And how well have they stood up to the cold facts of the market place? Ask any design-conscious young couple intent on setting up home and the scepticism of *their* reply might well be expressed in angry disillusionment. They know that many things they have admired in The Design Centre are going to cost them a good deal more than their tawdry equivalents from the local shop round the corner. Where, then, do the arguments fall down?

The answer depends on what you mean by "large quantities". There is plenty of evidence to show that a refrigerator, camera, cooker, heating stove, washing machine or television set costs no more if carefully and tastefully designed than the most ill-considered junk. The cheapest car on the market in this country, the new Ford *Popular*, has a body shape that is likely to be remembered as a classic of its time. All these products are from industries in which mass production means what it says. And since there is no tradition to act as a stranglehold on progress (few people could conceive a Jacobean motor car) the well designed product has as much chance of succeeding on a mass market as anything else.

It is in those industries which have strong links with the past, and therefore a background of craft production, that the 'good' is likely to be distinguished by its price. The firms making such things as pottery, glass, textiles, and furniture are smaller, the quantities less, the market more difficult. The larger of the craft-based firms have more to lose if they produce a flop. The smaller ones will lose less and can afford to be more adventurous. But usually for adventure we must pay dearly.

While this may be of little consolation to the design conscious couple of today, it augers less ill for the couple of tomorrow. Understanding of modern design has spread rapidly in recent years, and as public taste becomes more assured the marketing risks will lessen. This in itself may not be enough, for the craft-based industries must also evolve into bigger units and approach production quantities equivalent to those of the domestic appliance industries. When that point is reached there will be no cause to query the cost of good design. But for the present the old argument, that good costs no more than bad, must inevitably have a hollow ring. J.E.B.

Pointers

Moscow fair

British industry is sparing few efforts to get a firm two-handed grip on overseas markets. Last year it staged the biggest-ever national trade fair in New York (DESIGN 142/66 – 69). Later this year it will reach out in the opposite direction with the largest display of goods from a Western nation ever to be held in Moscow.

This evidence of new energy in facing up to increasing competition deserves every encouragement, especially when the rate of industrial expansion has been steadily declining in recent months. Britain's exports to the USSR are at present only about one per cent of all the goods we send abroad. Judging by previous trade exhibitions in Russia, when British firms have shown their wares, the prospect of improving substantially on this figure is extremely good. The majority of products to be shown will consist of capital equipment including machine tools and other machinery. The opportunities for trade expansion in these fields will depend much on our ability to satisfy Russian requirements in design, and the need for a more progressive outlook in this respect among British firms has been the subject of recent articles in this magazine and will be taken up again in future issues.

Credit is due to the organizer, Industrial Trade Fairs Ltd, in appointing Jack Howe, one of our leading architects and industrial designers, to design two new pavilions in the famous Sokoliniki Park (two other pavilions on the site having been built for the previous American exhibition). A photograph of the model of these pavilions and a report of the proposals for the *British Trade Fair* are published on page 67 of this issue.

Two-way trade

Trade is of course a two-way business, and while we are concentrating on opening up new markets abroad we should not overlook the determined foot which our foreign competitors have already placed in the door of our own home market. The reciprocal exhibition which the Russians will be holding at Earls Court from July 7 for three weeks is an experience still to come which we shall look forward to with special interest. But already our nearer European neighbours have been busily opening showrooms and fixing up trading agreements which may soon make Continental furnishings and household goods as familiar in shops up and down the country as their British equivalents.

One of the most impressive examples of this recent European activity is the new Bond Street showroom of France & Son, the Danish furniture manufacturer. Designed, in conjunction with Trevor Dannatt, by Finn Juhl, who is also responsible for many of the items of furniture on display, this showroom demonstrates everything that we have learned to admire and respect in design from countries across the North Sea. Its airy spaciousness, its immaculate simplicity and its sparse but effective use of plants, pictures and other decorative details, add up to an impression of determination and business efficiency. Such skill cannot fail to impress the buyers whom it serves and acts as a real pointer to the standards we ourselves should be aiming at when we present our wares to the world.

Scandinavian enterprise

A more recent example of Scandinavian foresight in taking advantage of the opportunities presented by the European Free Trade Association is a new shop, Designs from Scandinavia, which has just opened in Regent Street. Here again the purposeful efficiency of the display emphasises the sense of quality and refinement of the products on show. The presence of these stainless steel and enamelled steel jugs and bowls, of teak handled cutlery, clear glassware and robust pottery are impressive enough to make our most conservative minded manufacturers sit up and take notice.

The shop, set up through the initiative of Porsgrund, the Norwegian pottery manufacturer, sells, in addition to its own work, designs from Sweden, Finland, Denmark and other Norwegian manufacturers. Further examples of Scandinavian enterprise in export markets are reported on page 67. What are British firms doing to compete with this growing activity? The problem will be discussed in a series of articles later this year.

Why use foreign glass?

While these trading developments can be highly beneficial to all concerned, it is disturbing to hear of cases where foreign goods are purchased in large quantities for institutions which we think of as having particularly national associations. The railways, for example, have a special place in English history and we were therefore surprised to learn that the majority of glassware used for dining cars on British trains comes from Sweden. The official explanation is that "as long as designs and specifications come up to standard, British glass is, of course, preferred".

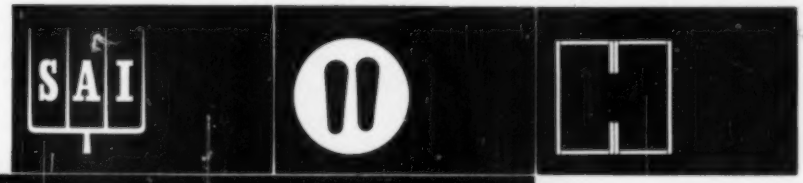
If the inevitable conclusion, that British glass does not come up to the standard required, is correct, then the glass industry has cause to be alarmed. Surely the effort on both purchasing and manufacturing sides to co-operate in producing a mutually satisfactory solution would be well worth while.

The unknown political consumer

How does the consumer fit into this trade picture? According to one politically-minded group, not nearly enough. What we need, it says, is a new political party to represent the consumer – a Consumers' Party that will act as a powerful third force in Parliament. "Politics", says the party's manifesto,* "will become less and less the politics of production and more and more the politics of consumption".

This magazine is, of course, very much concerned with the consumer for, as we have often argued, the study of consumer needs is a fundamental requirement in design. But those readers who see DESIGN as a potential *Tribune*-in-the-making must be disappointed. The consumer may be in, but politics are out!

* *The Chipped White Cups of Dover*, Michael Young, published by Unit 2, 144, Walton Street, London, SW3, 1s.



HOUSE STYLE INTERNATIONAL

ALEC DAVIS

Most trends in design today are international. It is unusual to be able to record three solutions to basically the same design problem which show distinct differences in the designers' approach – and the more interesting to do so when the differences reflect, to some degree, national characteristics.

In each case the problem was the now familiar one, in any industrial country, of creating a recognisable 'personality' in a manufacturer's print and other publicity material: evolving a house style. The designers concerned were working in Basle, for a client in Germany; in London for a client in Scotland; in Chicago for the USA.

The Basle approach is formal, mainly typographical; the Chicago approach – apparently informal – shows, on inspection, a *studied* informality. The London approach, as geography might lead one to expect, is somewhere between these two. While the Basle designers' work excels in flat printed matter, the British and American examples are most successful in package design. This difference has aesthetic as well as practical implications: in Basle the print house style had to echo a product house style already in existence, whereas the other two had to embrace and encase amorphous products (powders, liquids, pastes); to *be* the products, in the eyes of the prospective purchaser.

The Basle designers' devotion to the compositor's 'case', and their realisation of the design potential of its contents, are evident in their client's house mark, an outline letter H, ABOVE, which could be (though probably in practice it seldom is) made up entirely from printers' rule.

The style here is the outcome of painstaking attention to every detail. It is probably fair comment that few British or American designers would want to pay so much attention to detail *unless* they had already come under Swiss or Bauhaus influence. What is more humbling, on the Anglo-Saxon side of the fence, is that few of our designers could achieve such niceties of detail if they wanted to, not because they lack brilliance, but because they rarely have the opportunity of working so closely with a team of like-minded photographers, printers, etc. Perhaps time ("the job's wanted the day after tomorrow") and distance ("printer 100 miles away" in England, or " . . . 1000 miles away" in America) are against them.

Which is not to say that the London and Chicago house styles are not excellent in their different, less formal and more human ways.

HOUSE STYLE SCOTLAND/ENGLAND

Scottish Agricultural Industries Ltd serves two masters – the farmer and the gardener. To the farmer it supplies seeds, feeding stuffs and fertilizers in bulk; to the gardener, packs and cartons containing smaller quantities. To the two kinds of customer, typical products of the company have therefore a different appearance – but that is no reason why the face of the firm, as a firm, should not be the same for both. It was no doubt the realisation of this fact that caused SAI to commission George Collett Associates to create a new face, which now appears in all new SAI packaging and print.

The first necessary step was to do away with an old house mark, consisting of the letters 'SAI' squeezed into a circle, and to put something more meaningful and more memorable in its place. A four-pronged fork with the three letters in the spaces between the prongs was the answer. Next, a livery in the new house colours – red, grey and black – was introduced for the firm's lorries, which until then had varied considerably from region to region.

In the house mark, the company initials are in bold condensed Egyptian letters, contrasting with the style adopted at the same time for product names, descriptions, and instructions, all of which are in sans serif types. Since the light, legible, and fashionable Grot 215 was chosen as the standard face for wording on cartons, it was clearly desirable to use a heavier face in other applications where the method of printing and the nature of the surface to be printed made so light a face impracticable. For such applications, Grot 9 was introduced instead. There are thus sound technical reasons for choosing it for the printed headings of SAI's bulletins (on duplicating paper) **4**, and for the big hessian sacks (printed from rubber blocks), **3**; and commonsense reasons for using Grot 9 also on the labels which are tied on to the sacks for delivery, **4**. On the *paper* sacks used for SAI fertilizers, **2**, Grot 215 was used with equal logic: the surface would take the type, and the design was a repeat of the design of one group of cartons – **1**, *right* – a stylised garden gate. The range of cartons designed for the firm's gardening best-sellers makes brilliant use of full-colour photographs, well produced by photo-litho. What the picture, **1**, cannot show is that the backs, which are purely typographical (directions for use, etc) are in their way as well designed as the fronts. Here the clarity of Grot 215 in fairly small sizes is evident.

DESIGNERS *George Collett and associate James Reid.*
CLIENT *Scottish Agricultural Industries Ltd.*

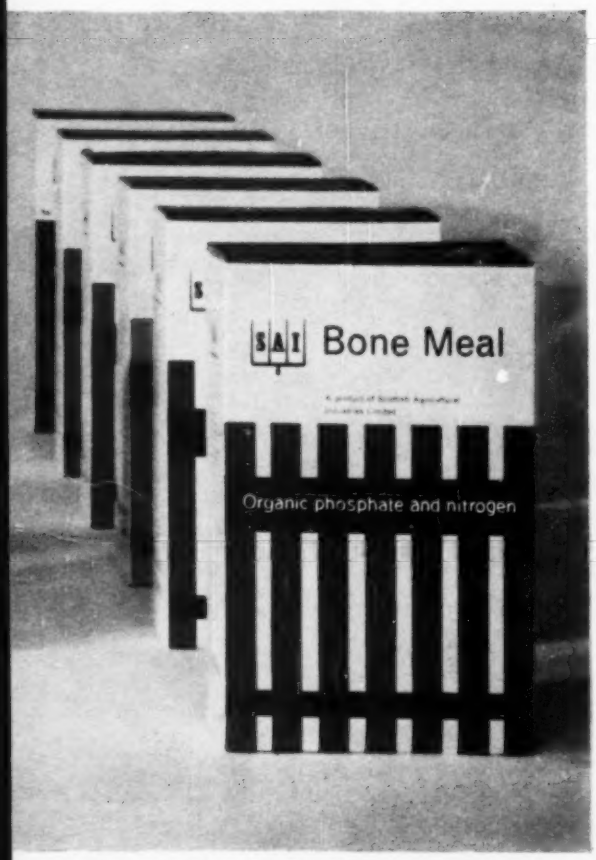
1

2

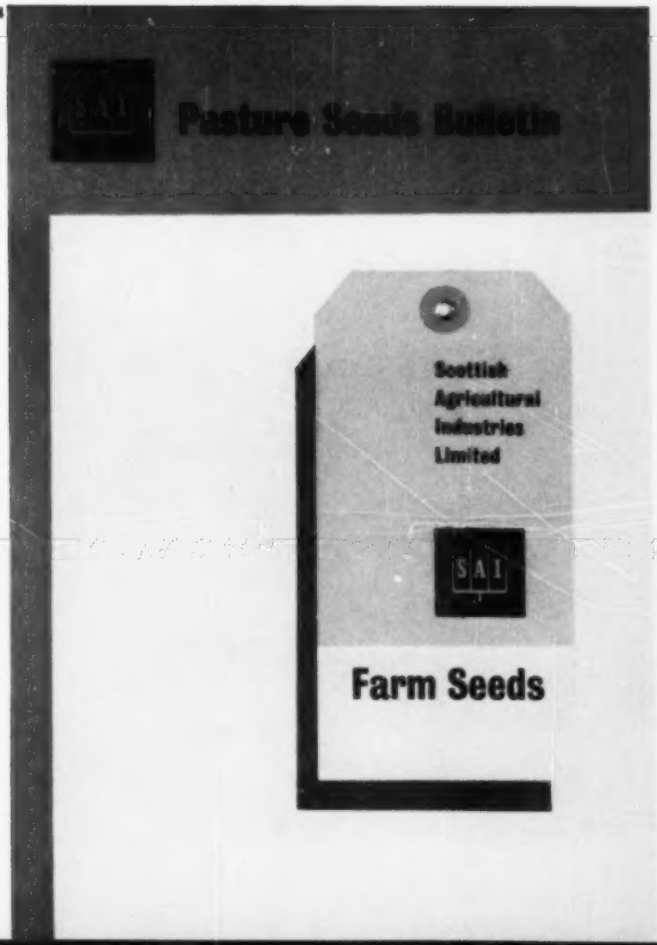
Garden
Fertilizer

3

Farm
SAI
Seeds
12


SAI Bone Meal
Organic phosphate and nitrogen

4


SAI
Pasture Seeds Bulletin
Scottish
Agricultural
Industries
Limited
SAI
Farm Seeds

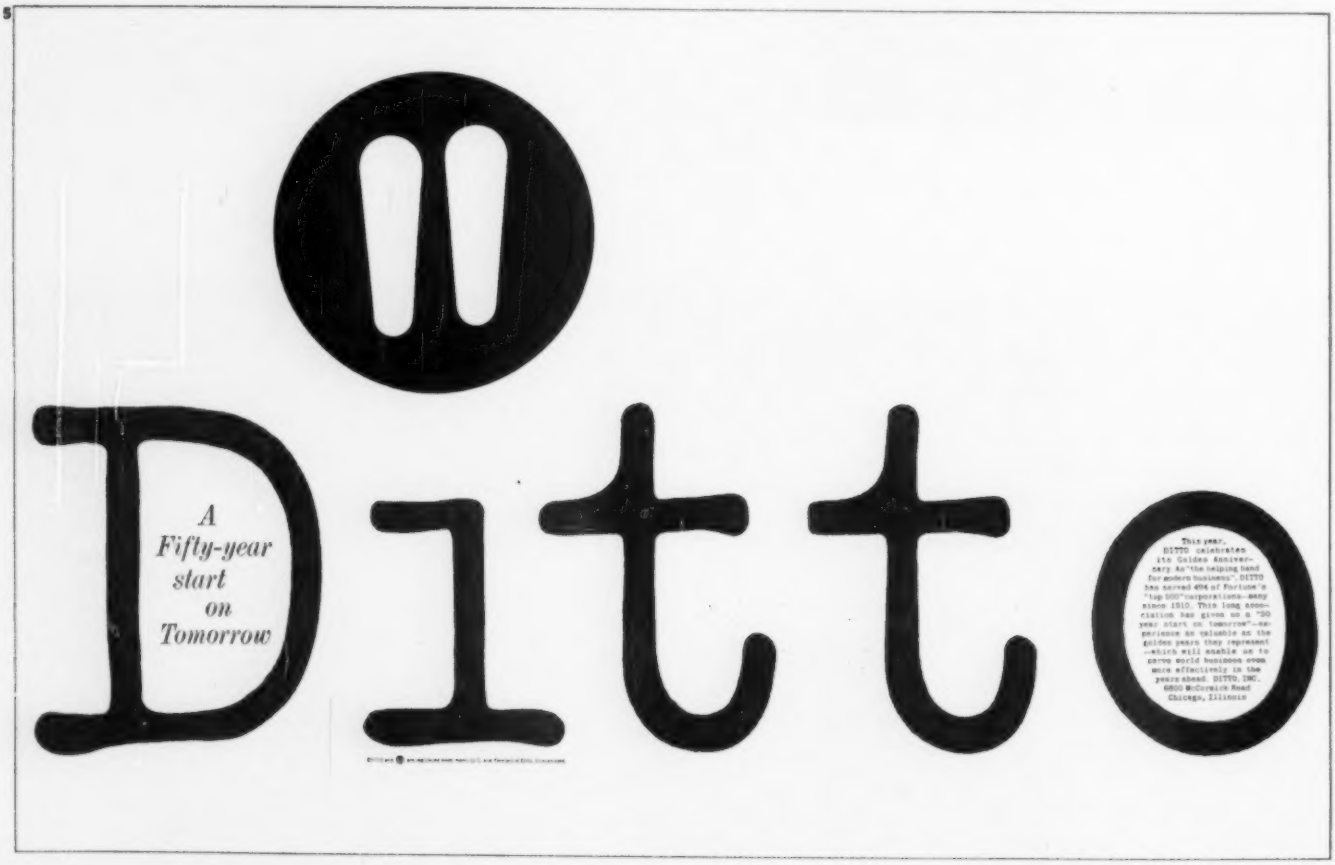
HOUSE STYLE USA

Ditto Inc has been selling duplicating supplies to American business for the last 50 years, and its products are available on the British market through its subsidiary Ditto (Britain) Ltd. The firm recently felt the need to present a more modern face to the world, and called in Morton Goldsholl Design Associates of Chicago as design consultant. Morton Goldsholl found the existing Ditto trade-mark "virtually unimprovable" – but he has shown Ditto Inc, very convincingly, how much more valuable a good trade-mark can be when it is the focal point of a complete house style. The style now extends from stationery to delivery vehicles; quantitatively, it is most evident in packs, wrappers, and labels, of which 120 have already been redesigned, with more to follow. On all of them, the outstanding recognition-marks are the ditto sign, with its two dots slightly and skilfully out of alignment, and the irregular lettering of the Ditto name, which, without impairing legibility, immediately suggests typed or duplicated characters – Ditto's business. Descriptive wording on the packs,**7**, is in similar style, but here the emphasis is on readability rather than simulation of duplicated lettering.

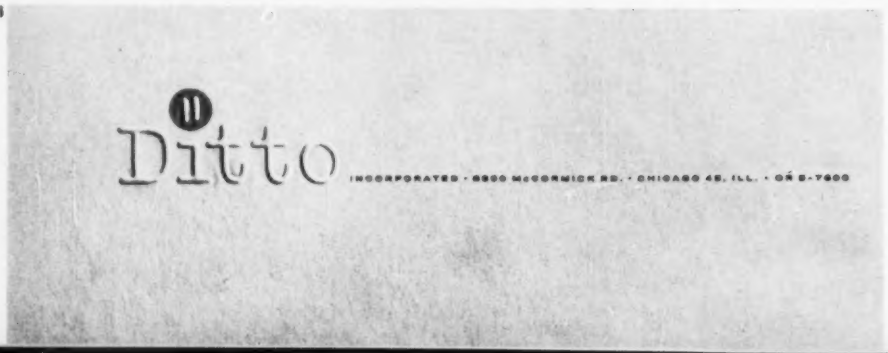
There is no one house colour, for the good reason that colours are used to identify different groups within the corporation's wide range of products: cerise, for example, is the colour for anything connected with the *Masterfax* machine, whether pens, paper, process fluid, or other materials.

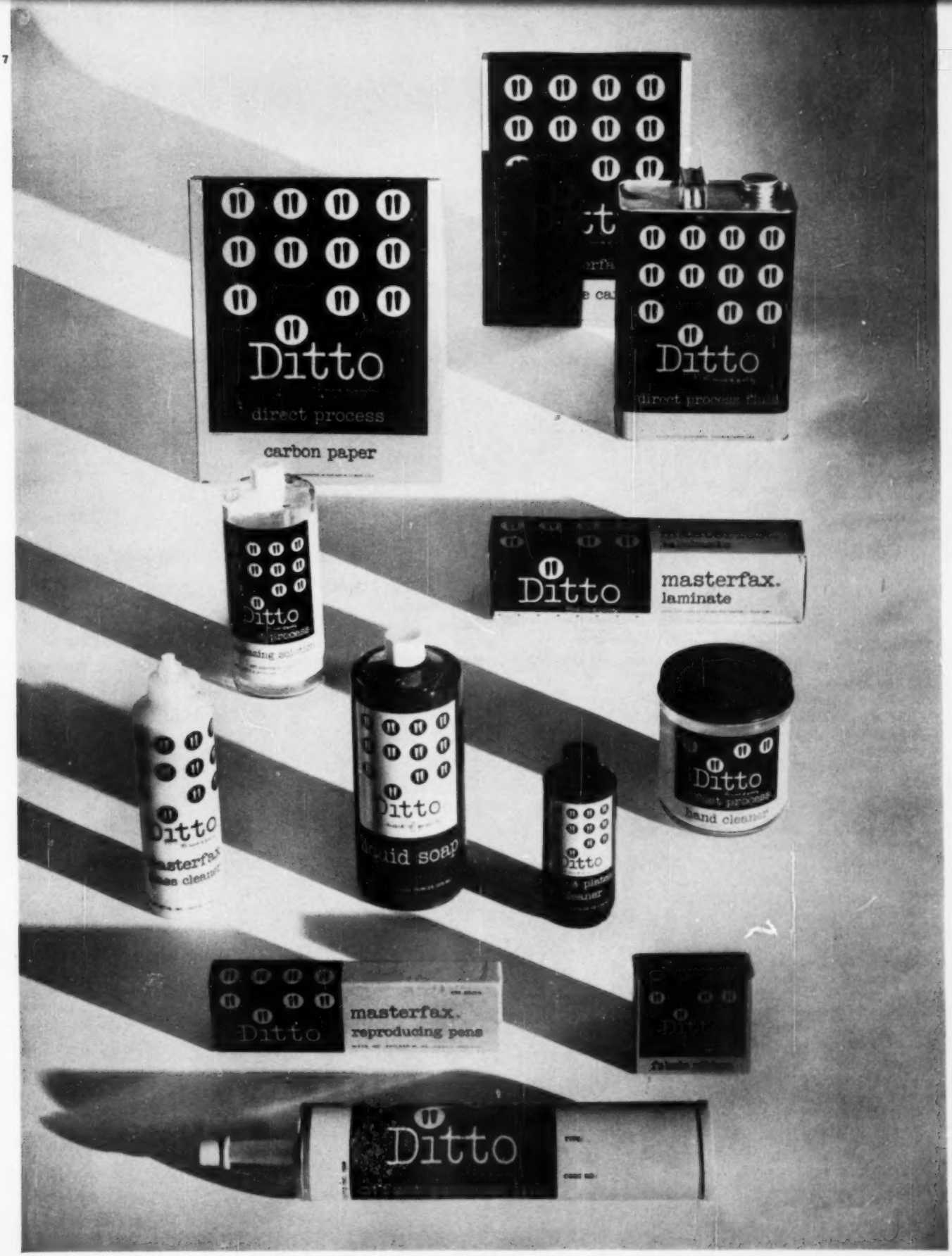
The uncluttered presentation of the name style appeared as a double-page advertisement in *Fortune*, in gold (predominantly), red and black, **5**. In contrast, the design of the letterhead, **6**, is very restrained, with no colour except a small blue background for the ditto marks; the name is blind die-stamped (with rather less irregularity of outline than in the publicity material); everything else is small, black and without serifs, on a crisp white paper water-marked with those displaced ditto marks again. DESIGNER *Morton Goldsholl Design Associates*. CLIENT *Ditto Inc*.

5


Ditto
A Fifty-year start on Tomorrow
This year, DITTO celebrates its Golden Anniversary As "the helping hand for modern business", DITTO has served 45% of Fortune's "top 500" corporations—many since 1910. This long association has given us a "50 year start on tomorrow"—experience as valuable as the golden years they represent—which will enable us to serve world business even more effectively in the years ahead. DITTO, INC. 6800 McCormick Road Chicago, Illinois

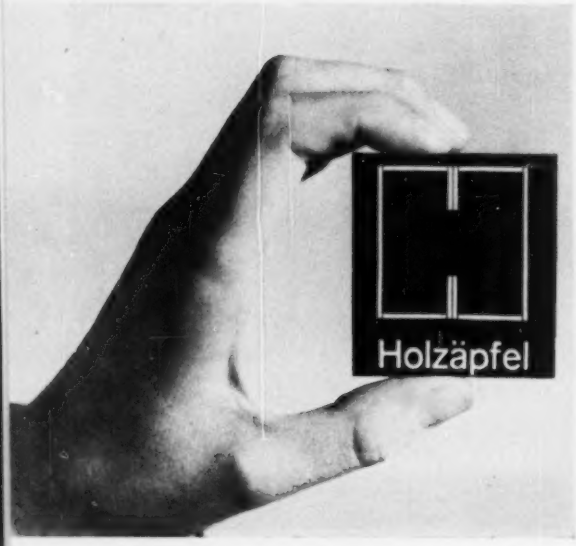
6




Ditto
direct process
carbon paper
Ditto
masterfax.
laminate
Ditto
hand cleaner
masterfax.
reproducing pens
Ditto

HOUSE STYLE
GERMANY/SWITZERLAND

8



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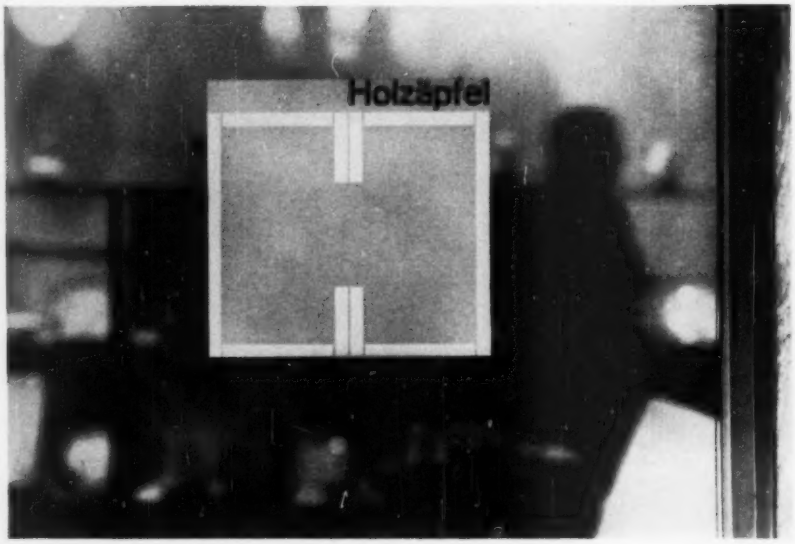
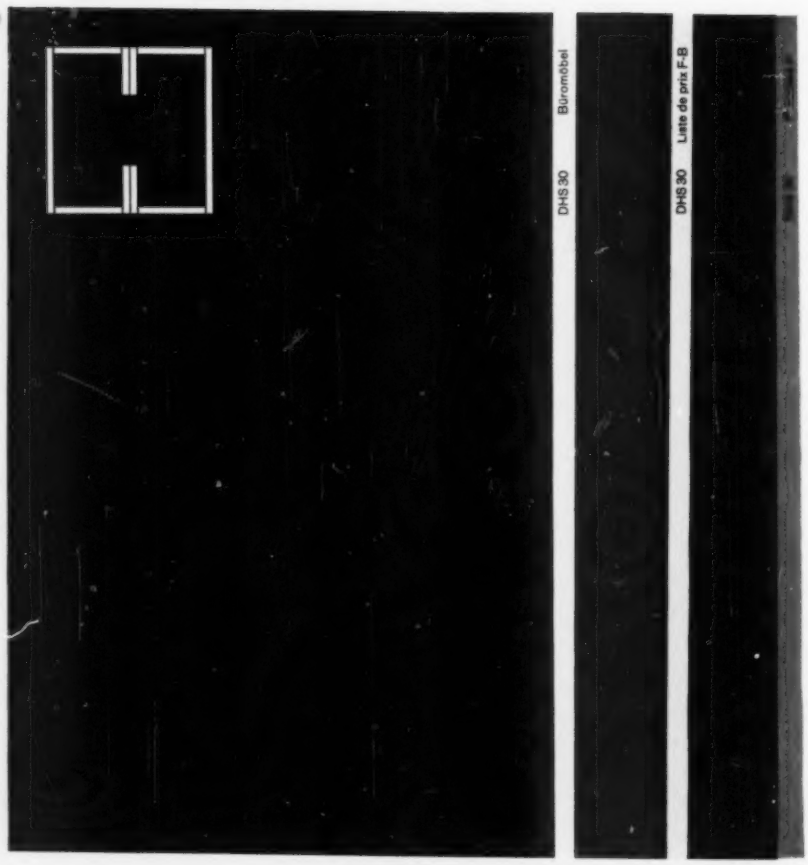


Holzäpfel is a German furniture manufacturing firm which recently went across the Swiss border to Basle for the design and production of its printed matter. The most important and the most interesting items in this range are the firm's catalogues, but the style which is established by them is equally evident in Holzäpfel stationery and in advertising material. This includes book matches, **8**, window stickers, **9**, leaflets, **13**, as well as press advertisements, **14**, **15**. The thought that has gone into every detail (and into the integration of details) in the catalogues, **10**, **11**, **12** is evident but unobtrusive; this is the kind of art that conceals art.

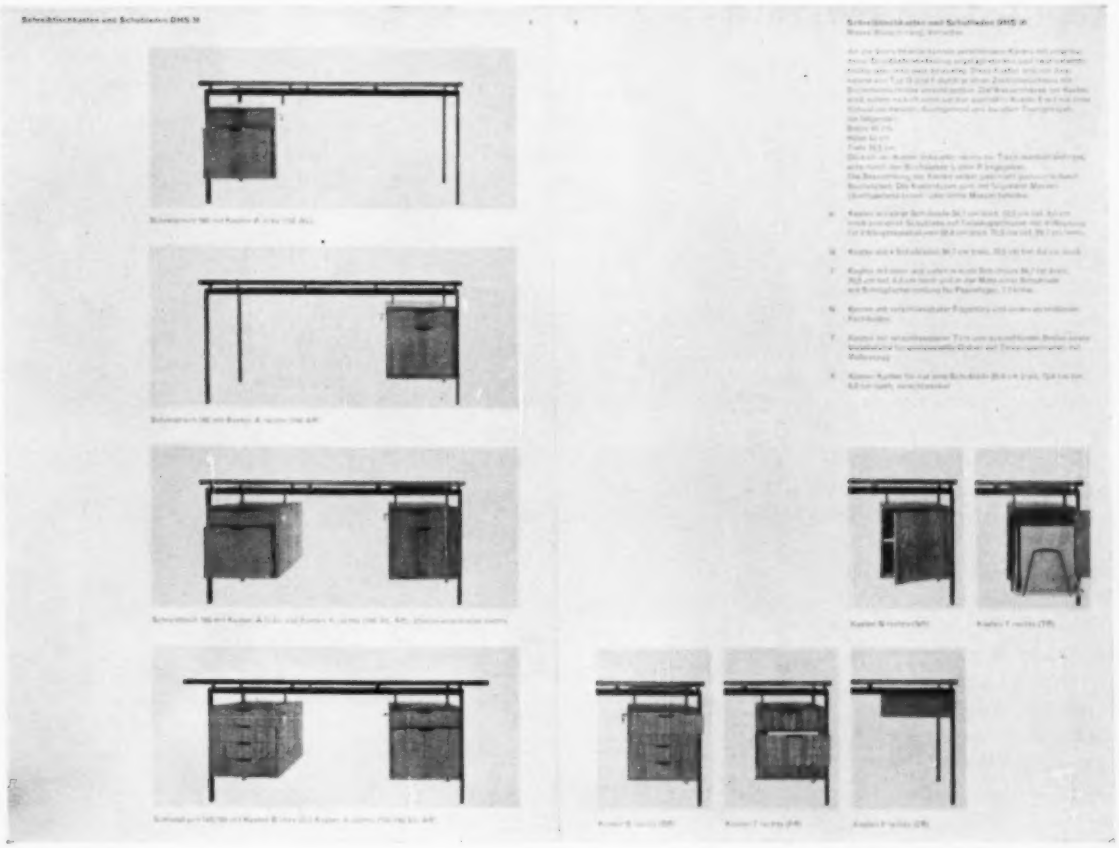
The Basle designers have succeeded in creating a style in typography and layout which echoes the formal qualities of the manufacturer's unit furniture so closely that one feels the furniture might have been designed to justify the existence of the catalogues. All the furniture is photographed from table height, **12**, and alternative arrangements of drawers and other units are shown side by side or above and below so that comparison is as direct and straightforward as possible. A few large photographs, eg **11**, add human interest to these catalogues, but most of their pages tackle the basic job of cataloguing with thoroughness and success. This kind of catalogue is concerned with communication rather than persuasion, but it can sell goods to the interested reader because it presents the information he wants in a logical, easily assimilated form. The three catalogue covers for three ranges of Holzäpfel unit furniture, are predominantly white/grey/black, and price lists for each range have covers to match, using coloured filing strips to distinguish the different price lists within the range, **10**. In the advertisement, **15**, the illustration is similarly coded by using three

10



11

12



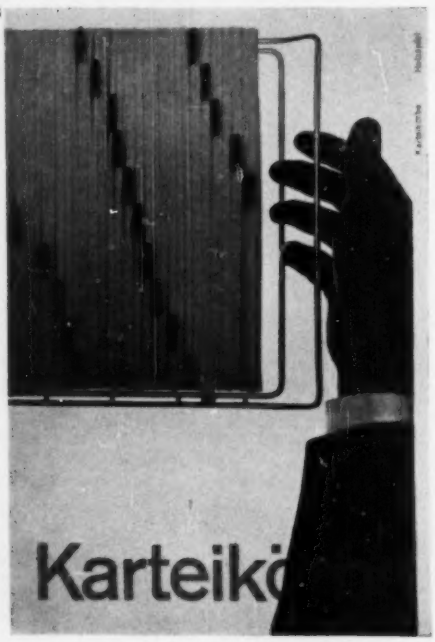
continued

HOUSE STYLE
GERMANY/SWITZERLAND

different strengths of tone – light grey/medium grey/almost solid black – on one halftone block. The other advertisement, **14**, is a catalogue illustration with the address and additional information stripped-in on the block. The manufacturer has notably benefited from being able to put everything from basic conception to passing-for-press in the hands of one design team: layout, typography, photography, copy, blockmaking and printing – all handled in a town about the size of Sunderland, England, or Salt Lake City, USA.

DESIGNERS *Gerstner + Kutter*. CLIENT *Christian Holzäpfel KG*.

13



14

preiswert elegant normiert: PEN das neue Büromöbelprogramm der Christian Holzapfel KG Ebhausen Württemberg

15

PEN für jedes Büro. Dieses elementarste Programm ist zugleich das allgemeinste: Es lässt sich aus Elementen in beliebiger Vollständigkeit zusammenstellen.	DHS 300 im Büro des Chefs. Diese spezielle Stellung im Zentrum aller drei Holzäpfelprogramme verlangt spezielle Vollendung: DHS 300.	DHS 30 am Platz des Anspruchsvollen. Im Bereiche wichtiger Aufgaben wird das Büro mehr als blosser Arbeitsplatz: Es wird zum Lebensraum.
PEN for every office. This programme is at once the simplest and the most richly potential. Any desired combination of the elements is a whole in itself.	DHS 300 for the Director's Office. The central position among Holzapfel's programmes demands the special care given to the perfecting of - DHS 300.	DHS 30 for persons of taste. Where big decisions are everyday matters, the place of work becomes something more than a mere office: it becomes a living environment.
PEN per ogni ufficio. Questo tipo di mobilio, costituito di diversi elementi permette di arredare l'ufficio nel modo desiderato.	DHS 300 per il capufficio. Una posizione speciale richiede una sistemazione speciale: DHS 300.	DHS 30 per i più esigenti. Per chi deve assolvere compiti più impegnativi, l'ufficio non è un semplice posto di lavoro, ma un posto di soggiorno.
Christian Holzapfel KG Ebhausen/Württemberg Bundesrepublik Deutschland	Christian Holzäpfel KG agencies all over the world, addresses through Holzapfel KG	Christian Holzäpfel KG rappresentata in Italia da: A. Sciolari Spa, Roma e Milano

Es gibt viele Büromöbelprogramme.
Die Erkenntnis, dass erst das Genormte Variationen erlaubt und somit eine Vielzahl von Zwecken zu erfüllen versteht, setzt sich durch. Die grundsätzliche Lösung dieses Problems ist also angedeutet, jedoch die Realisation bringt erst das Holzapfelmöbel: Die drei Büromöbelprogramme der Holzäpfel KG sind in ihrer Vollständigkeit und Eleganz einzigartig.

There are plenty of office furniture programmes . . .
New ideas are in the air: the norm admits of variations, allows the fulfilment of a multitude of different purposes. The basic thinking has been done, but the turning of fresh thought into reality has been the exclusive work of Holzapfel furniture: the tasteful perfection of the three Holzäpfel programmes makes them unique in the field.

Esistono diversi tipi di arredamento per ufficio.
Bisogna anzitutto riconoscere che nel campo del mobilio esistono molte possibilità di variazione, in modo da poter soddisfare ogni esigenza. Con il mobile Holzapfel il problema principale è risolto: i tre tipi di mobili per ufficio creati dalla Holzapfel KG sono unici per la loro completezza ed eleganza.

13 Cover for a leaflet.
14 Magazine advertisement.
15 Magazine advertisement for the three Holzäpfel ranges.

Seating dimensions: *theory and practice*

Differing approaches to the problem of presenting anthropometric data intelligibly to the designer are demonstrated in recent publications of the British Standards Institution and the Furniture Development Council. The B S I, concerned with fixed-height office chairs, informs designers of the size of chair to make; the F D C, concerned mainly with upholstered, easy chairs, provides tables of human dimensions. The author of the following article compares the practicability of these two approaches. She first describes the problems of applying the B S I's recommended chair dimensions in an actual project carried out with the assistance of DESIGN. *If it is difficult to design an anthropometric chair when the actual dimensions are given, how much more difficult it will be, she goes on to say, if the designer has to start with human measurements and then interpret them in terms of optimum chair sizes. This is the weakness of the F D C report, which nevertheless makes an extremely valuable contribution to the designer's equipment.*

Chair dimensions . . .

BRIGID O'DONOVAN

Dancer and Hearne Ltd makes large quantities of inexpensive office chairs. Although the firm was not convinced at the outset that the application of the BSI recommendations[1] would be successful, the decision was taken to try the project and see what would happen.

The intention was to follow BSI recommendations as closely as possible, irrespective of any preconceived ideas. Yet despite clear instructions on dimensions the first mock-up was made with a seat height of 18 inches. (Chairs have been 18 inches high for so long that they almost grow that height out of the tree.) Where the BSI recommendations were not so rigid, or deliberately permissive, the mock-up was to undergo fitting trials by people selected from the works to cover 95 per cent of the national size range, a concensus of opinion being taken. Lastly the chair was to be designed so that a 1-inch footstool could be bought if desired and stowed safely in the frame. This last provision was a particular act of faith on the part of the firm. In spite of ample demonstration that the footstool increased the comfort of the chair for shorter people, the firm is not sure that customers will buy it.

The price range was considered, and an attempt was made to find out what might be appropriate, without using elaborate methods of inquiry. Investigations showed a remarkable range of ideas about price, from office managers who jeered at the thought of paying more than £3 10s to those whose clerks were ensconced in £15-worth of swivelling steel and rubber. Finally it was decided to make the chair as cheaply as possible but without skimping the upholstery and so reducing the comfort. The price eventually will depend on the quantities made but should be between £6 and £7 to the customer.

Some dimensions of the final mock-up are given in Table 1 BELOW, together with the comparative BSI sizes.

Table 1

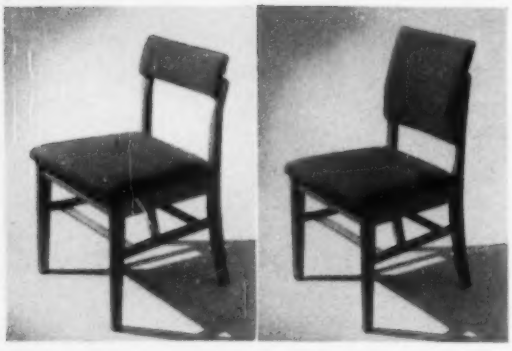
	MOCK-UP	BSI
Seat height	17 inches	17 inches
Seat width at middle	17 inches	16 inches (minimum)
Effective seat depth	14 inches	13-15 inches (14 inches recommended)
Slope of seat	3°	3°-5°

Two points are worth noting. The BSI makes no mention of the frame in giving a minimum width of seating as 16 inches. Yet a seat with a frame of 16 inches proved too narrow for comfort, and so 17-inches width, which includes the cushion, was selected. Secondly, it proved difficult in a padded chair to arrive at exact dimensions and maintain them through design and manufacture.

But even greater difficulties arose with the back rest. Here the BSI gives measurements for a short back 4-5 inches deep, mentioning that a long back with curvature in two planes would be satisfactory – but without giving any particulars. Try as one might, altering height, width, curvature, depth of padding, and the angle, it was not possible to find a compromise to suit all the test subjects when using a narrow back rest. Since two quite different back rests are recommended, the decision which to have, whether long or short, was a serious one. Eventually two prototypes were made to similar dimensions, one with a short back rest and the other with a longer rest, **4** (over). The main lumbar support occurred at the same place on both long and short back rests, between 8 and 13 inches from the seat height. The bottom edge of the long back was not more than 4 inches from the seat, so that when seated the person could not go too far through the gap between seat and rest, otherwise the relationship with the chair back would be incorrect. It appeared that this might have been one of the main troubles with the short back which was tried initially.

The two prototypes were put into an office building for final trials, and 12 people sat on each model for a fortnight. At the end of this period a substantial majority was in favour of the long backed version, and it was decided to go ahead with this type.

Having finalised the various dimensions the design was completed. Even then care had to be taken to translate the mock-up dimensions into a finished product. The back unaccountably moved up an inch (the designer, Colin F. Gibson is a tall young man) and the legs grew ½ inch



1 and **2** Two subjects used in the fitting trials, **1** from the 5th centile, and **2** from near the 95th centile.
3 To determine the optimum location of lumbar support a mock-up was used with more elaborate back adjustments.
4 Two prototypes were used to find out which back was preferred.
5 The final design to agreed dimensions

when domes of silence were added. The seat height without domes of silence or rubber protection is now less than 17 inches, so that whatever may subsequently be attached to the legs the seat height will substantially remain 17 inches. The design team also considered the type and thickness of the upholstery, which has a considerable influence on the price. The eventual choice was to make the padding sufficiently thick and firm so that all but the heaviest will not bottom on the frame.

The finished chair, **5**, is of mahogany with a preformed plywood back padded with 1-inch thick Aeropreen. The seat is a conventional frame with 2-inch jute webbing supporting 1-inch thick Vitafoam. The covering is Vynair. This design will make its public *début* later in the month at the *Furniture Exhibition*. Orders have already been received and production is commencing. Considerable care will be needed even at this stage if the dimensions are not to alter. Also the chair could be improved by paying more attention to refinements of detailing and appearance.

. . . and human measurements

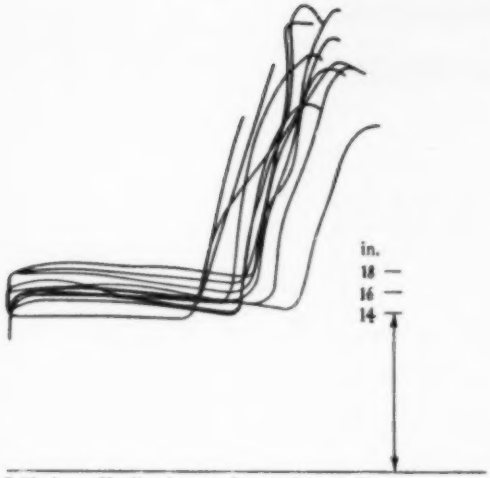
If it is difficult to get results from the B S I publication it will be even more difficult from the F D C pamphlet[1] on human measurements. Naturally, the B S I started off from the same measurements (though in unpublished form) from which it derived the chair dimensions. The designer of upholstered furniture will have to derive his own dimensions. Nevertheless, he can be extremely grateful for this clear little pamphlet, so ingeniously devised. Hitherto he has had measurements for neither chairs nor people. The result is underlined in, **6** and **7**, taken from the pamphlet, which shows the profiles of 12 easy chairs with the following differences in measurement:

Seat height from floor	14-18 inches
Seat depth back to front	16-24 inches
Back height from seat	16-26 inches

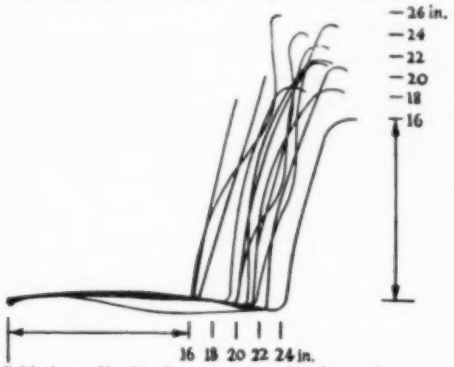
As the F D C says "Common sense would indicate that the chairs cannot all be perfect".

The main table of the pamphlet, **8**, gives a list of the seated heights and widths of men and women. The seat heights are from the floor and most of the others, eg elbow height, eye level, are from the seat. Nine measurements are given for men and eight for women. The population of Britain is divided into five groups for each sex according to height, and all the seated measurements are given for the 5th, 25th, 50th, 75th and 95th centiles.

Nothing is said in the pamphlet about how the figures

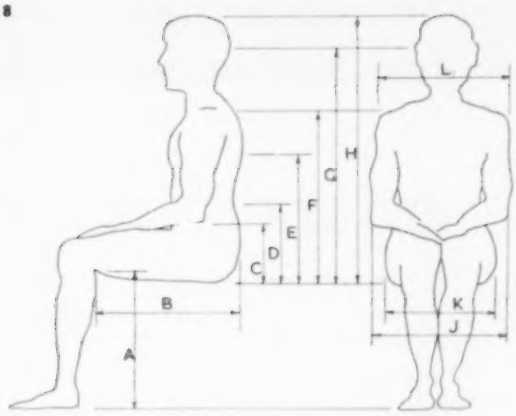


6 Chair profiles lined up on floor and front of seat



7 Chair profiles lined up on seat and its front edge

8



Estimated nude measurements in inches of the British population between the ages of 18 and 40

		Percentages of the population with dimensions *less* than those given below									
		MEN					WOMEN				
		5%	25%	50%	75%	95%	5%	25%	50%	75%	95%
	Stature	63	65½	67½	69	71½	59	61½	63½	65	67½
A	Underside of thigh—floor	15½	16	16½	17	17½	14½	15	15½	16	16½
B	Buttock—back of calf	17	18	18½	19½	20½	16½	17½	18½	19	20
C	Elbow—seat height	7	8	8½	9½	10½	6½	7½	8	8½	9½
D	Lumbar height	(8)	(9½)	(10)	(10½)	(12)	—	—	—	—	—
F	Shoulder—seat height	21	22½	23	23½	25	19½	20½	21½	22	23½
H	Sitting height	33	34	35½	36½	37½	31	32½	33½	34½	35½
J	Elbow width	14½	16½	17½	18½	19½	13½	14½	15½	16½	18½
K	Seat width	12½	13½	13½	14½	15½	13½	14½	14½	15½	16½
L	Shoulder width	15½	16½	17½	18½	19½	14	15	15½	16½	17½

No information is available on the dimensions **E** (seat—shoulder blade) or **G** (seat—back of head) shown in **8**.

were derived, but there is an explanation in an F D C research report, *Anthropometric Data for Chair Designers*,[3] from which the pamphlet was prepared. The authors had fairly good measurements of overall standing height for the British Isles, together with standing and seated heights for certain groups in the U S A. From the available British and American measurements, the authors have extrapolated dimensions for British seated measurements. The measurements apply to people aged 18-40 because so many measurements have to be derived from military surveys, since neither here nor in the U S A has a survey of measurements been taken for the population as a whole. Nevertheless the seated measurements have been put together by a competent team, and are not only the best available, but are good in themselves.

The table of human measurements is followed by advice on how to apply them to chair dimensions, but here one cannot be so sure that the best, and still less, the most complete information has been given. In a paragraph on seat height nothing is said about avoiding under-thigh pressure by deliberately making an allowance of ¾ inch on the inner leg height, as recommended by Åkerblom[4]. Designers are advised to choose seat heights near the minimum of the range, but it is not clear whether this means the women's range. There is also a good deal of emphasis on the need for higher chairs for old people. The net result is likely to be encouragement to designers to make seats too high. The information on seat depth may also encourage them to make seats too deep. The pamphlet ends with excellent advice on how to choose test subjects from the factory to try out a prototype. It will be most interesting to see over the next year or two how designers get on with the advice, and whether the design of upholstered furniture alters for the better. At the moment the majority of such furniture is the wrong size.

It will have been seen from the description of the work on the Dancer and Hearne chair that where the B S I recommendations for chair dimensions were ambiguous or deliberately permissive, a great deal of empirical work had to be carried out to find a satisfactory solution. The upholstered chair designer has even more work in front of him. Some practical easy chair dimensions ought not to be too difficult to work out, even if only between broad limits. Meanwhile the F D C is studying other aspects of comfort in upholstered furniture and other criteria of comfort may be agreed, as well as the anthropometric data.

[1] W. F. Floyd and D. F. Roberts, *Anatomical, Physiological and Anthropometric Principles in the Design of Office Chairs and Tables*, BS3044: 1958. Price 5s.

[2] *Measurements for Comfortable Sitting*, Furniture Development Council.

[3] H. Darcus, M. J. Merrick and D. Barkla, *Anthropometric Data for Chair Designers*, FDC research report No. 8.

[4] Bengt Åkerblom, *Standing and Sitting Posture*, A-B Nordiska Bokhandeln, 1948.

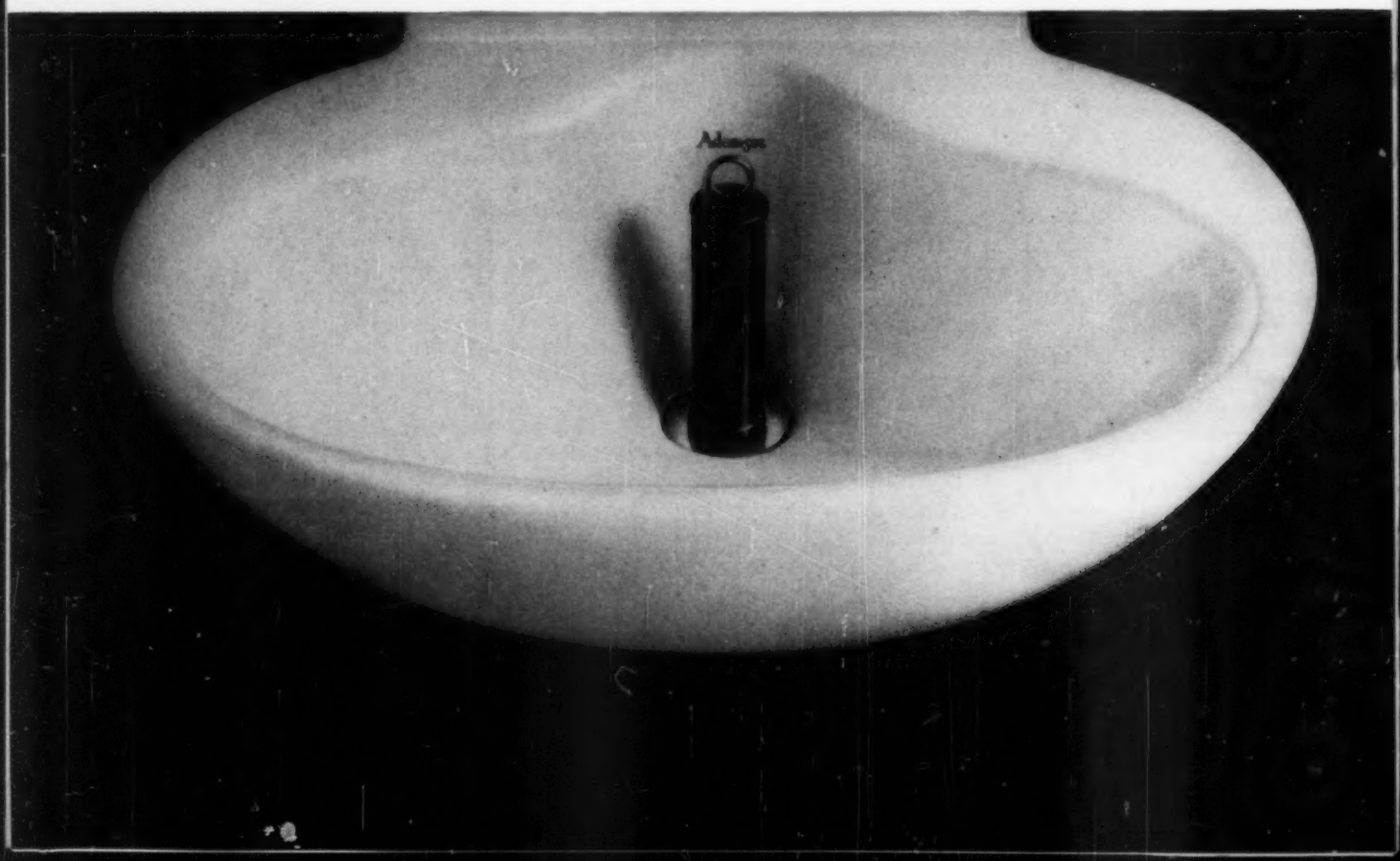
SANITARY WARE

J. BERESFORD-EVANS

A new series of articles to be published in alternate months will survey recent design progress in individual industries. This first survey concerns basic equipment for the bathroom.

The industry responsible for producing sanitary ware has made some positive moves in the past year or so towards a more imaginative approach to design. But the author questions whether this has gone far enough and suggests there are several areas where further development is needed.

1 This is the pioneering ancestor of almost all new basins. Corbelled and with wall-mounted taps, it has that clarity and economy of means which we associate with the best of modern interior design. But it was designed 10 years ago for surgical work. DESIGNERS *A. H. and B. Adams.* MAKER *Adamsez Ltd.*



Although there are over two dozen established sanitary potters who manufacture domestic ware, only about half a dozen are known to the public by name and of these it may well be the trade name rather than the firm's name. Some manufacturers make ware to be sold under a distributor's name and might well produce a basic pattern which, with minor variations, is sold on the market under four or five different names.

While the industry is centred on Stoke-on-Trent and its surroundings, Kent, Somerset, Durham and Scotland all have potteries manufacturing vitreous china, earthenware or fireclay products. Most firms have their own traditional export markets and patterns manufactured as standard items, and in spite of past recessions and restrictions both at home and abroad, order books are, on the whole, reasonably full.

Since the war there have been several major sales setbacks in the industry and at one time nearly all export markets were restricted. Even short time working has been common in the industry. The sanitary potters, however, are not as complacent as some industries and largely by their own efforts have regained their markets. During slack periods major technical development and often large rebuilding programmes have been undertaken; nearly all kilns are now automatically controlled and the firing is more consistent and accurate than that of 10 years ago. Coupled with development in the control of clay and glazes, this has led to higher quality ware as well as less wastage of materials.

The larger manufacturers have mainly concentrated upon technical development, and some of the relatively small family businesses have been equally progressive in design. The sudden enlivenment of design throughout much of the industry, in the years immediately following the war, can be seen to stem from the work of one firm, Adamsez Ltd. Brian and Alan Adams work in fireclay, which was thought of as an old fashioned material. It must be used in a broad and somewhat massive manner, but it is suitable for small runs and is a flexible material for development work. Following a lead from some experience with hospital basins they collaborated with the schools' architects for Hertfordshire County Council to make some domestic sized and logical basins. These Lotus and Bean patterns have influenced the design of products by other manufacturers. The now famous Shires *Lynx* cistern in black plastics, designed by John Barnes of Allen-Bowden Ltd, has also been imitated.

Derivative designs

During the last five years practically every manufacturer has produced new designs; consciously or subconsciously these stem either from the pioneering designs mentioned or from German or Italian originals. In lavatory basins a new 'parish' pattern has developed, which, while commendable for its simplicity, does tend to be rather undistinguished. A few designs of character are produced from time to time, usually inspired from outside the industry. These tend to be diluted by the limitations of manufacturing techniques and seldom are made available as a complete range (as distinct from a suite).

But, in spite of the limitations, clay ware is often better than its associated brassfoundry fittings. A lavatory basin has – or can have – so much interest in its sculptural form that the controls, the brassware, need only to be in harmony with the ceramic shape and to be efficient. To compete for attention in the manner of most 'luxury' brassware is bad manners and almost as harmful, from an aesthetic point of view, to the ceramic ware that carries it as are the crabbed castings which comprise the average fitting.

Standards are most desirable, but the limitations of the British Standards specifications for brassfoundry are very great and discourage design development; but perhaps worse than this is that fittings to BS may not be accepted by the individual water boards.

Excellent brassfoundry exists and credit for raising the overall design standards goes largely to one firm, Barking Brassware Co Ltd, which manufactures a comprehensive range of good, simple products and, as in the case of Adamsez (the sanitary potters) these have strongly influenced other firms. It has been responsible for introducing most current forms. Two or three manufacturers have developed shapes of their own but designs are so similar in this industry that it is almost impossible to give correct credits. The closeness of the similarities is such that originator and competitor often can scarcely be distinguished.

Starting from first principles

In any fresh approach to design which starts by examining first principles, it will be seen that water is the first sanitary requirement and the development of fittings beyond the jug and basin stage has followed the use of piped water. Water, in a sanitary context, is only a vehicle for dirt and, though reasonably clean water is desirable for washing the person, clothes and dishes, etc, it has no real need to be the fine drinking water that we usually run down the drain.

Basin and ewer had their companion slop pail, but piped water, stimulating development of the lavatory basin, bath tub and water closet, has its companion waste pipe system with the key invention of the self-sealing trap. The greater part of plumbing design is concerned with the provision of suitable wastes and the problems of siphonage that go with them. A fluid passing down a pipe will build up a positive pressure ahead of it and create a negative pressure behind the flow. These, in turn, will tend to suck the sealing water from the traps and blow gases through them or force waste water back into the fittings, and similar unpleasant things.

At the same time, the water supply authorities have been concerned with the dangers of contamination of clean mains water by the induction of dirty water into their systems. If, for instance, a basin is so full that the tap dips into the water (dirty or contaminated), and at the same time there should be a negative pressure in the main, then a whole community might become infected. This has influenced the design and location of taps and valves, which are also held to rigid standards to avoid leakage and waste of water.

These and other restrictions, together with a lack of original thinking, make the provision of sanitary equipment in an ordinary house an expensive and cumbersome matter, with an aura of unaesthetic, inconvenient and noisy manifestations. We have come to accept many of the limitations without question because the ordinary user cannot be selective. He can, to a large extent, choose his kind of cooking or heating arrangement; but he must take what the plumber and the water authority tell him he can have, contenting himself with a choice of superficial design.

However hard a manufacturer may try to improve his designs, he is hemmed in by a set of piecemeal and *ad hoc* regulations that –

though reasonable in detail and isolated context – have never been examined as a system. Each water authority engineer tends to entrench his own regulations, so that the value of the few who try to integrate in a reasonable manner is mocked at. Why, for instance, is a two gallon flush sufficient for one district, when three gallons is demanded by another? Why, one wonders, does an authority find it necessary to mark every fitting, including storage tanks, with its stamp of approval (for an appropriate fee) before these may be installed? Yet there are no laws against the use of second-hand fittings, for which there is a thriving trade.

The lowest denominators give the widest market coverage – and also have been gathered into the British Standards – so that any design which varies, upwards or downwards, from this sad mediocrity is penalised from the start. Technical considerations alone are insufficient when the elementary convenience of the wretched user is ignored or the manufacturer is prevented from designing as well as he might.

Short of a vigorous enquiry by Government, there seems to be no easy way out of this stalemate. The Building Research Station has recently done some excellent work in simplifying plumbing design, and a similar fundamental research on appliances and brassware might help to breach the entrenched interests and give the more design conscious side of the industry a chance.

The kind of questions that a research might start with are those that ordinary, uninstructed housewives will ask in their innocence. That they can at present be firmly told why not, is no satisfaction of their needs, and the problem is not solved by avoiding it.

Why should a storage cistern or a WC cistern make any noise? Could not water flow into these without rushing, bubbling, choking and hissing sounds that are pipe-borne throughout the house?

Why cannot a basin be filled with warm water without twiddling *two* screw down capstans? A development of the single tap spray system, perhaps?

Why cannot a bath be filled to a predetermined mark at a required temperature (analogous to a modern cooker)?

Why does the builder have to cut tiles to fit round a basin? Could not tiles and basin come in the same module?

Why is there always a groove or crack where the bath, basin or sink fits against the wall or splash-back?

Why is a shower stall – and often the floor of a bath – as slippery as a skating rink?

Why do most fittings induce splashes and why are they not shaped or sized for men or women to use with ease? Anthropometrics is a respected subject, that has done much to give us more comfortable seating, especially in offices and schools. Is the WC seat too private and delicate for logical thinking?

Why is it so difficult to clean inside and behind a WC? Why are there most crannies in the least accessible places, like the back of the trap at floor level and the hinges of the seat? Should we not expect this fitting, of all things, to be the most accessible and easy to clean?

These are a few of the problems which should now be tackled. Improvements to the form of ceramic sanitary fittings evident in some illustrations to this survey, represent a welcome break from the unhappy conventions of the past. The way is now clear for some more basic re-thinking both by industry and by the authorities which control its development.

Lavatory basins

2 A minimum sized lavatory basin for use with a mixing/spray tap. The free form of the nominal spiral gives the degree of interest needed at this scale. Model *Lotus Spiral*. DESIGNER *Alan H. Adams*. MAKER *Adamsez Ltd*. Unitap *Mixing / spray tap*. DESIGNER *C. L. Barker*. MAKER *Walker, Crosweller & Co Ltd*.

3 This basin is typical of the main stream of modern designs that are corbelled or have hidden brackets with a thin edge to the bowl presented to the user. Now almost a parish form, its origins lie in fireclay design for hospitals and schools. Model *Luna 919/1*. MAKER *Twyfords Ltd*.

4 Compact corbelled lavatory basin showing the supporting brackets flowing neatly into the form of the bowl. MAKER *Adamsez Ltd*.

5 The elliptical shaped bowl set in the basically rectangular surround does not look unusual today, yet it was one of the first successful attempts to break away from the set, rectangular forms in a large lavatory basin. It received a *Design Centre Award* in 1958. Model *Carlton*. MAKER *Shanks and Co Ltd*.

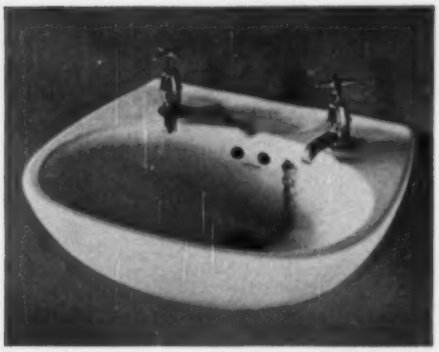
6 This design loses some of the interest of more free forms, but it gains in crispness. Model *2667P/3*. DESIGNER *E. S. Ellis*. MAKER *Twyfords Ltd*.

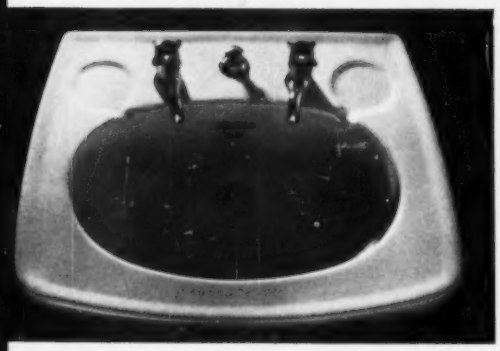
7 The conception of a lavatory basin as an integral part of a work top is not new but has recently been revived in the form of a 'vanitory unit'. This basin, with its flat sides and ample work surfaces has been designed with this purpose in mind. MAKER *Johnson Brothers Ltd*.

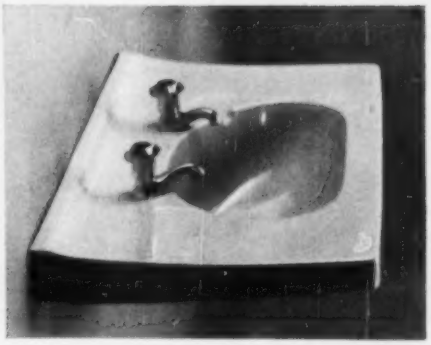
8 and **9** Two designs by the same manufacturer show the type of variation on a theme which reflects current practice throughout the industry. The placing of the taps in **9** provides space to clean behind. In **8** the taps are further back making it less easy to clean behind and very difficult to clean under the spouts. MAKER *Johnson Brothers Ltd*.

10 A small basin, ingeniously contrived to give considerable bowl capacity with plenty of shelf and soap area. The taps are kept clear of the main washing area. (See also DESIGN 128/42-46). Model *Cygnet*. DESIGNER *W. M. Goslett*. MAKER *Alfred Goslett & Co Ltd*.

Prices vary according to fittings, colour, size and quantity ordered and are available from manufacturers.







Sanitary ware

11 | 12

13

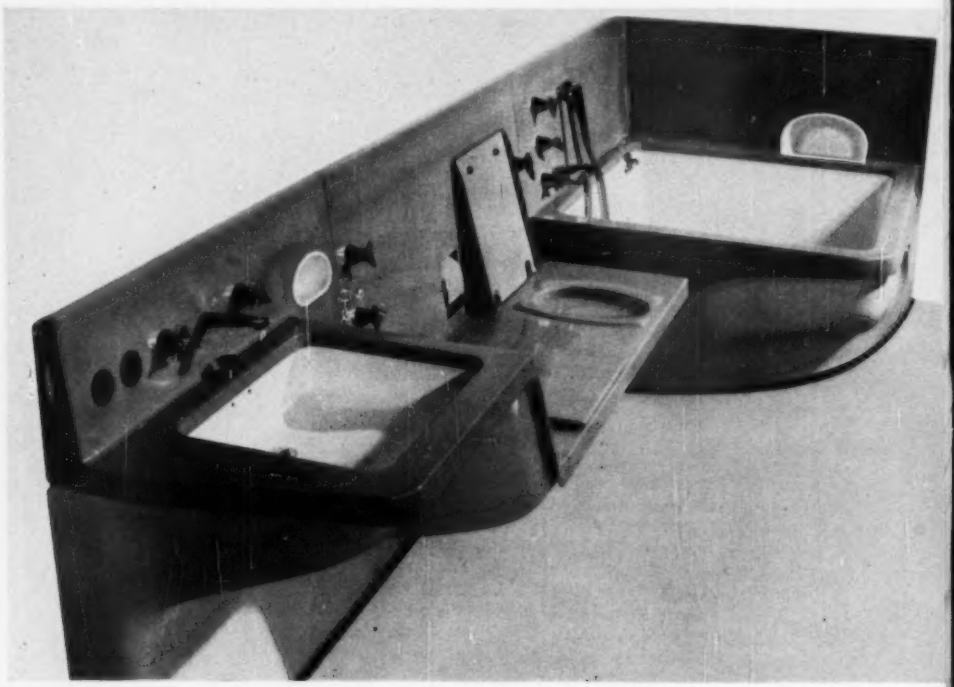
Overseas developments

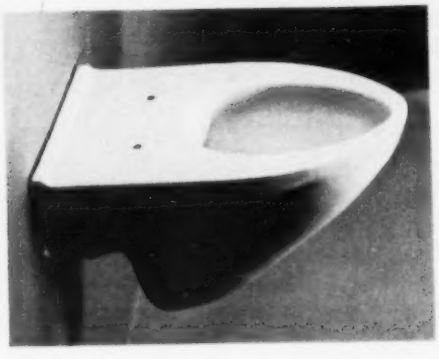
11 The forms of this basin recall the organic shapes of *Art Nouveau* and reflect the current Italian search for inspiration among earlier styles. It is however, a lesson in decoration. The sgraffito texture belongs to the clayware, very different from the floral embellishments used to tart up some luxury ceramics. Model *Torena*. MAKER *Società Ceramica Italiana SPA*.

12 and **13** Two experimental attempts in glass fibre from abroad to produce complete sanitary units. The Italian design, **12**, is a practical prefabricated system with integral plumbing designed to be assembled in various ways to suit different sized rooms (DESIGN 107/66). The French bathroom, **13**, designed in 1956 for the *Salon des Arts Ménagers*, is more directly related to the free form of the house itself and is therefore further removed from current realities. Both, however, point to the possibilities of less conventional thinking on sanitary ware design.

12 DESIGNER *Alberto Rosselli in conjunction with the Plastics Research Institute, Castellanza*. MAKER *Blocchi Togni*.

13 DESIGNER *Hervé de Looze for* Salon des Arts Ménagers.





14 17

15 16 18

continued

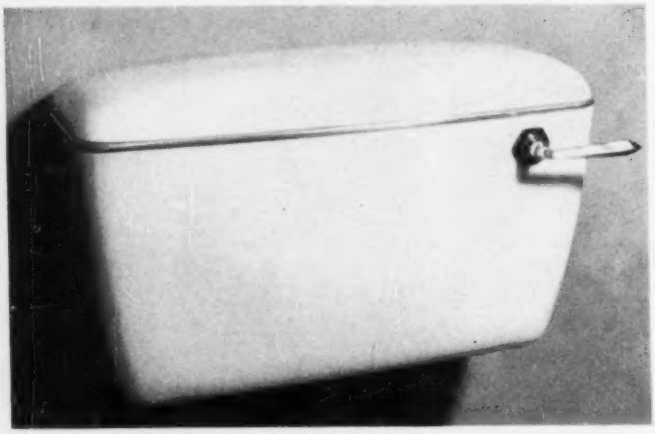
WC's and bidets

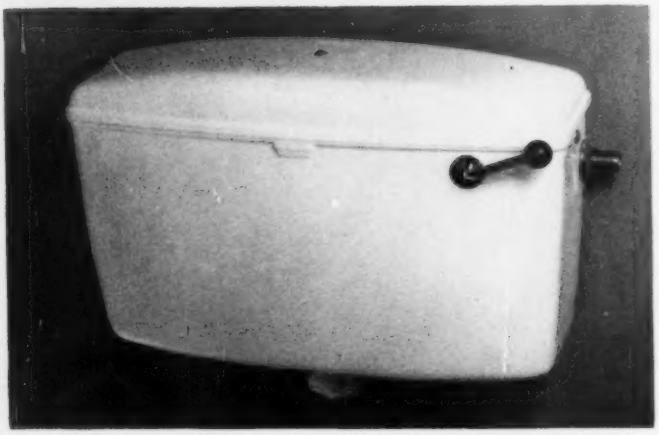
14, **15** and **16** Designed for cleanliness, there is no internal flushing rim in this *Lotus* WC pan, **14**; all the underparts flow together and considerable elegance comes from the shape. Unfortunately, the parts behind the trap are difficult to get at for cleaning. Due to by-laws such shapes as the Adamsez rimless bowl corbel WC, **15**, which is flush-mounted on a wall, must be so designed that the soil pipe connection is accessible for inspection. Yet other countries can use fully moulded shapes and in the Italian example, **16**, the absence of concealed parts makes the base particularly easy to clean. **14** DESIGNERS *Alan H. Adams and D. L. Medd.* **14** and **15** MAKER *Adamsez Ltd.* **16** Model *Olimpica.* MAKER *Società Ceramica Richard-Ginori SPA.*

17 The clayware of this bidet is well and modestly done. The brassware is of fine quality, but looks somewhat pretentious by comparison. DESIGNER *David Queensberry.* MAKER *The Lilleshall Co Ltd.*

18 The narrow face of the support makes the whole appliance seem light, though it has width enough for stability. A close coupled cistern such as this, cannot echo the form of the pan. The simpler, thinner and more architectural it is the better. Model *Ceremant 2774.* MAKER *Twyfords Ltd.*

19 The forms of this cistern originally produced in black plastics are equally appropriate in vitreous china (as shown here) or earthenware. Though basically rectangular and crisp, the planes are quietly curved so that it can form a partnership with the WC. Model *Lynx*. DESIGNER *John Barnes of Allen-Bowden Ltd*. MAKER *Shires & Co (London) Ltd*.





20 This cistern shows an interesting technical development in high impact polythene moulding. The somewhat familiar shapes often derive from the manufacturing technique. Model *Eterna*. DESIGNER *J. F. Parker*. MAKER *Fordham Pressings Ltd*.

21 23 22 24

Taps

21 Convenient, quick and logical; but forbidden by water board regulations for all but hospital use is this quick rise, elbow lever tap. Model *EA103*. MAKER *Barking Brassware Co Ltd.*

22 A lavatory basin can have so much interest in its sculptural form that the controls, the brassware, need only to be efficient and in harmony with the ceramic shape – not to compete for attention. This design is basically unpretentious, but it reveals the common fault of a dirt trap beneath the spout. With a hooded capstan the hood rises when the tap is turned on revealing a band of dirt which can only be cleaned while the tap is running at full bore. MAKER *Sanbra Ltd.*

23 Conforming strictly to British Standards, this design has been discreetly handled. It received a *Design Centre Award* in 1958. Model *No. 65*. MAKER *Barking Brassware Co Ltd.*

24 Habits change slowly, but if one washes hands under a tap this is a logical appliance, as one tap controls temperature. The spray head and all the detailing are direct and purposeful. Unfortunately it can only be installed where the hot and cold water tanks supply equal pressures. This makes it unsuitable for most domestic applications but ideal for public buildings where it can help economy in the use of water (see cover design). Model *Duflo*. MAKER *John Bolding and Sons Ltd.*

This article returns to the problem of **SAFETY HARNESS DESIGN**

and discusses developments since Secured Safely? *was published* (DESIGN 140/46 – 49). *Malcolm J. Brookes reports on developments at the last* Motor Show, *and describes some American research, H. Brian Cottee of* The Motor *reviews the new British Standard, and this is followed by two letters on the subject.*

1 and **2** The latest British development in safety harnesses, known as *Belbrace*, was exhibited on Citroen's stand. This is an integrally designed harness and seat working on the inertia reel principle

3 Safety harnesses may not necessarily be the final answer to greater safety on the roads. The sequence of illustrations was taken by Motor Vehicle Research Inc to demonstrate the value of comprehensive studies designed to produce an inherently safe vehicle. The car is a 1957 Chevrolet Sedan in a 'roll-over' accident at 40 mph. But the driver "is unhurt because the doors are bolted to prevent roof collapse, rear seat and cushions have been removed, front seat is welded to frame and all interior trim, knobs and projections have been removed". IBM sponsored the tests which were shown in the US on a TV programme, produced by Professor J. Karas of the University of New Hampshire. Photographs by Harry Trask, *Boston Herald*. ▶

The recent *Motor Show* provided an opportunity to track down any new evidence of increased use of safety harnesses. Unfortunately there are only two items of news, and a few rumours to report.

Firstly, Jensen Motors Ltd has taken the initiative in the British motor industry, and the *S* series two door saloon which this company makes is now fitted with safety harnesses as standard items for both front seats. The model selected is a diagonal belt manufactured by Britax Ltd. H. R. Clark, general manager of Jensen's, pointed out that he would not entertain the idea of a harness which relied on the strength of the front seat. However, the use of a diagonal belt was not a straightforward remedy to overcome this, as the door pillars from which this type is anchored are thin and mounted well behind the front seats. Jensen's overcame the problem by running a steel bar in parallel with the door pillar and mounted the harness on that.

As for the rumours, it seems that sometime in the future the Austin *A 55* may be fitted with safety harnesses. There is no official confirmation, but something is likely to be happening at BMC for the rumour to start. Standard's, also, may soon be introducing safety harnesses. On new cars the anchoring points will be built-in during production, and for present models detail drawings are being supplied to the company's spares division so that location points can be correctly positioned.

Other manufacturers merely persist in saying that the problem is or has been under consideration. P. L. Watson, home sales manager for Morris Motors Ltd said: "Frankly, I don't think we have any policy where safety harnesses are concerned – at least none that I've heard". However, the Rootes Group appears to be getting more ideas, for on the Hillman stand was an estate car fitted with an Irving Air Chute lap strap *and* a Britax diagonal harness. The latter is such an innovation for Rootes that it does not yet appear in the catalogue of accessories.

Perhaps these reports show some enlightenment in the car industry. As yet, however, there is no news of any manufacturer studying the design of a complete packaged system for a car, nor even of designing his own safety harness. Any inquiries about harnesses were immediately referred to the spares representative, indicative of the industry's attitude to the problem. But now there is good news of a British development. W. E. (Bill) Rand has for some years studied the problems of car and aircraft safety harnesses. Mr Rand has designed an integral harness and seat working on the inertia reel principle, i e the wearer is free to move gently with the belt, **1**, but if loads greater than about 0·6g are applied the harness locks. Only Citroen has a car with *Belbrace* fitted, **2**, but Mr Rand says that prototypes and design studies are now under way for most British car firms. It is said that the seat structure and harness, adjustable slide and vehicle attachment points will be designed to withstand a minimum g deceleration to be assessed for each type of vehicle. Now it is up to car manufacturers to increase the stress characteristics of their cars to a *maximum* figure for crash survival.

Finally, one snippet of information which may or may not be correct. The Motor Industry Research Association is said to be studying the packaged characteristics of cars.

When Donald Campbell crashed at over 350 mph during his recent attempt on the land speed record he was wearing a special safety harness made by G. Q. Parachute Co Ltd. "Without it", he said, "one's body would have been smashed to a pulp." Without the combination of a superlative chassis construction and the use of a safety harness, the outcome of the accident could well have been disastrous.

Already comprehensive studies have been carried out in the USA. One of the most outstanding reports is that contained in *Auto Crash Studies*. The work was carried out by D. M. Severy, J. H. Mathewson and A. W. Siegel of the department of engineering, University of California. The foreword points out that financial support for the project was provided by the US Air Force. A general abstract describing the report states: "Fully instrumented automobile collision experiments, with anthropometric dummies taking the place of motorists, provide scientific data not otherwise obtainable. An engineering analysis of the physical factors relating to three experimental car-to-car side impacts at 30 mph, two head-on collision experiments at 23 and 32 mph, and two car-to-fixed-barrier impacts at 28 and 35 mph are presented. The instrumentation, equipment, facilities and operational procedures used to obtain this information are briefly described.

"Specific data include position-time sequences of occupants and vehicles during and following impact, their linear, rotational and vectorial deceleration and acceleration patterns; the colliding vehicle's interaction as well as the interaction of occupants with vehicle interiors, as quantified by force-time and kinematic behaviour patterns with resulting inferred injuries."

Various novel ideas are thrown up such as the use of a passenger restraining net between roof and floor, behind the front seats. Has anyone in Britain tried this?

Further studies have been conducted by Andrew J. White, director of Motor Vehicle Research, Inc.

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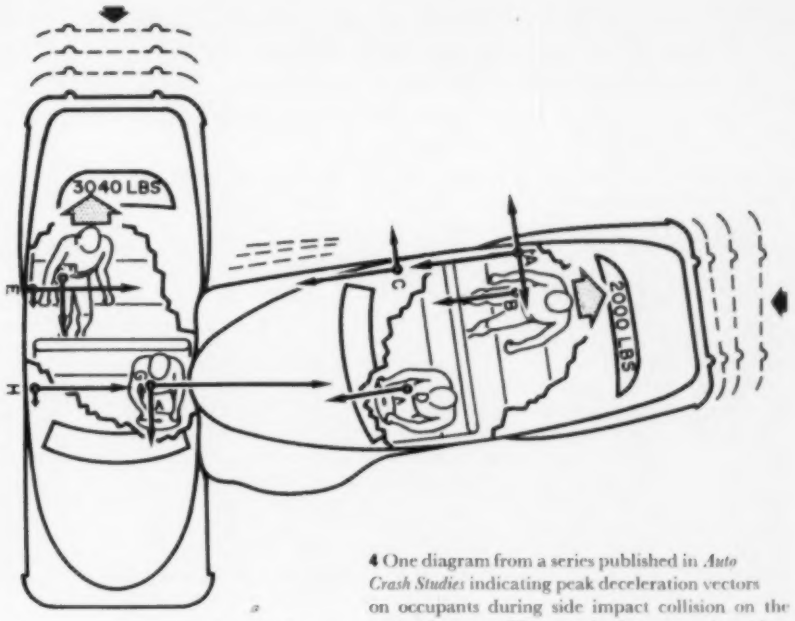

4 One diagram from a series published in *Auto Crash Studies* indicating peak deceleration vectors on occupants during side impact collision on the centre door post. The magnitudes were measured empirically and appear in tabular form against time after initial contact of the vehicles. For example, 53 milliseconds after contact the chest of the driver G recorded 28g deceleration laterally, the impinging speeds being about 30 mph.

MVR was founded by Mr White as a non-profit making organisation to study safety aspects of automobiles. In a paper* published as long ago as 1957 Mr White concludes: "The most important consideration concerning seat belts used in automobiles is that data regarding these safety devices be valid and capable of withstanding investigation by further research. Until such data are to hand, all research groups should refrain from advocating such devices". Is data readily available in Britain?

So far, MVR's studies imply that far more consideration should be given during vehicle design to a construction which would be of value in protecting car occupants in crashes. In other words the ideal packaged system should be sought after. The use of safety harnesses and other devices merely circumvents the main issue.

Standards for safety

A new British Standard, covering tests for car safety harnesses, was published shortly after DESIGN's recent article *Secured Safely?* (140/46-49) went to press. H. Brian Cottee, of *The Motor*, writes:

Ideally, any specification relating to safety equipment should: a, set the lower limits as high as is currently practicable, and b, be so comprehensive as to leave no loopholes in testing procedure through which unsatisfactory equipment can pass. The British Standards Institution's new standard, BS3254:1960, *Seat Belt Assemblies for Motor Vehicles* seems to meet the first requirement admirably, but may fairly be faulted to some degree on the second. Since the BS appears over two years after the equivalent, but more comprehensive, Swedish specification on which it is partly based, this is unfortunate. But it must be appreciated that the BSI itself is a disinterested body divorced from any commercial promotion or application of the products which it tests, and must therefore steer a finely balanced course when the committee compiling the standard comprises not only members of research bodies (eg DSIR), but also representatives of companies already making equipment of the type under review.

However, in setting a minimum static loop-load strength of 4,000 lb for seat-belt assemblies (based on the assumption of restraining a 200 lb adult with a force equivalent to 20g deceleration) the BSI have exceeded the stringency of the Swedish test, which sets the static load figure at 1,500 kg (3,300 lb). Already the British figure has proved beyond the capability of some belts on the market; and in respect of quick-release buckle efficiency, webbing elongation under load, and general manufacturing standards, BS3254 is indeed excellently clear and searching.

The main omissions concern dynamic testing and durability. There is some prospect of a dynamic load test of seat-belt assemblies being included in the standard some time in the future but until this is done, using anthropometric dummies and high-speed cameras, it is not possible to be *sure* that bodies will be properly restrained by the various belts and harness in head-on impacts of around 20g severity – the critical case. Nor is it possible to determine whether the stretch of webbing under load is simply plastic deformation, which provides useful shock absorption, or whether the webbing is storing

* Andrew J. White, *The Role of Safety Belts in the Motorist's Safety*, Clinical Orthopaedics No 9, 1957.

energy which may be released in snapping the wearer back into his seat after impact, with a risk of whiplash injuries to neck or spine. And without a dynamic test, equipment working on inertia-reel principles (which may eventually provide an ideal solution to the passenger-restraint problem) cannot be tested. Although dynamic load tests cannot be comparative between one belt and another, since peak load will depend to some extent on webbing stretch, their absence leaves a loophole. But the BSI apparently finds the Swedish dynamic test unacceptable, and it is certainly expensive.

As to durability, apart from a simple immersion test for surface corrosion of metal, the BS does not follow the Swedish precedent of specifying resistance to extreme heat, cold, sunlight, ageing and micro-organic rotting. When working with known materials the Swedes do not, in fact, always apply these tests, but there are materials which might reasonably be used for safety belt webbing that, although initially strong, are known to deteriorate rapidly in strong sunlight; and even some 'accepted' webbing materials may suffer actinic degradation in places where the sunlight has high ultra-violet content.

Then again the new standard necessarily makes little attempt to differentiate between the use of a lap strap or a full harness, and the accessory manufacturer, dealer or vehicle maker retains the onus for specifying the most suitable type for your car. But the standard is both excellent as a starting point for even better things and in its psychological effects which are already encouraging motorists to buy safety equipment with new confidence.

Readers' comments

Comments from two readers on *Secured Safely?* are are published below. Paul Treadgold, whose letter appears first, writes as an experienced motorist. Per-Olf Weman is a co-author of *Safety Belts for Motor Cars*, published by the Swedish State Power Board.

SIR: There are three important points which do not appear to have been raised in the article *Secured Safely?*

Firstly, and of the least importance, to what vehicles should safety harnesses be fitted? For example, is it any use fixing them to an open car, when the driver or passenger using a belt might be crushed instead of thrown clear if the car overturns? I would like to see statistics of accidents and of the type of injuries suffered by drivers thrown out of open cars compared with those suffered by drivers who are pinned under their vehicles.

Secondly, and I feel this is an important point, the aspect of comfort appears to have been entirely omitted. The greatest deterrent to wearing safety harnesses is that they are uncomfortable, and if they are tight enough to be effective they tend to chafe one's shoulders. In many cases, by preventing him from leaning forward, they do not allow the driver to reach the controls of the dashboard, and they do not permit reasonable movement to relieve fatigue on a long journey. Furthermore, they tend to crush one's suiting, and in the case of light clothes, will almost invariably mark them. Some men when travelling prefer to take off their coats. What effect will a safety harness have on a white shirt at the end of, say, 150 miles?

Thirdly, you have completely overlooked the question of women. The diagonal safety belt which you appear to favour seems to me quite incapable of comfortably fitting a woman, for somewhat obvious reasons.

I feel that these last two points require a lot more research on the part of the manufacturers of the belts (even the British Standard concentrates on the efficiency of a belt, with complete disregard of comfort, both male and female). But until these two problems are solved, I can never see a belt becoming popular, as it is every driver's contention that he is safe, and that the accidents will not happen to him. Finally, when the front seat hinges it is very difficult to fix a belt that does not get in the way of the rear passenger seats.

As far as the rally driver is concerned I do not think more than 5 per cent wear them on a small rally, or in the big nationals; and I think it unlikely that an overall figure of 15 per cent would be exceeded. Racing itself is another matter and here, especially in saloon cars, many drivers wear them. However, I noticed in the Tulip Rally only 25 per cent of the competitors wore safety harnesses, and it is interesting to note that when a TR with hard top overturned in a recent event neither of the occupants suffered more than superficial bruises, yet neither wore safety harnesses. The hard top was severely dented, but withstood complete destruction.

P. H. TREADGOLD
1 Vine Street
Uxbridge
Middlesex

SIR: I was very interested to read your excellent article (DESIGN 140/46 – 9), which seems to show a very considerable knowledge and understanding of the problems involved. However, as the result of our experiences in this country during the last six years, there are a few matters I would like to mention.

1 The article raises the question of whether British cars are designed to carry the impact loads from a safety belt of the Swedish diagonal type. This is an important question. Here in Sweden we have tested some British cars and we have found them strong enough. Furthermore we have hitherto never heard of a single case on the road where a belt of this kind has failed because the car was too weak at the points where the safety belt was fixed. As a matter of fact the webbing has proved weaker. We know a few cases where the webbing has failed in crashes at very high speeds.

2 You write in the article: "A further interesting point arises in the case of the Swedish Volvo safety harness. Originally the design was the single diagonal strap as described; but in an accident it has been found that the occupant, having been thrown forward, then recoils, with the head whipping backward and thighs rising towards the dashboard. To avoid any complex injuries to the lower part of the body which may occur, Volvo's new design combined a diagonal strap with a lap strap, preventing the lower part of the body sliding forward under the cross strap".

The reader might conclude from this that the diagonal or 'two point' belt is an older and less effective design than the model with the extra lap strap (the 'three point' belt). This is not correct. Both types were designed simultaneously and both were taken into consideration in the Swedish State Power Board's investigations. As you know it is very important that safety belts have good protecting properties. They must first of all have the required strength and elongation characteristics. But we also want people to use safety belts and it is therefore important that the belts can be simply installed and manipulated. The three point belt may give better protection in some accidents but it is more difficult to use and install, as well as being more expensive. Also it has been feared that the three point belt is more dangerous during the recoil action, because the displacement of the head relative to the rest of the body is greater in this case. Today perhaps 80 per cent of all belts that are sold in Sweden are of the two point type. (You mention the problem of the body sliding forward under the cross strap; this, according to our records, rarely happens.)

3 Your correspondent is right when he doubts the effectiveness of mounting safety belts on the floor so that the straps run over the weak back of the front seat. This does crush easily, with the result that a certain amount of the webbing is freed and most of the breaking distance of the passenger (ie the distance between the passenger and the windscreen and instrument panel) inside his car is wasted. With folding seats the back may collapse even under heavy braking – what would happen in an accident then?

4 When your correspondent writes that "when correctly restrained, the human body can certainly accommodate 20 g decelerations as the US Air Force experiments with Colonel J. P. Stapp have shown" he is understating the facts. Colonel Stapp subjected himself to more than 46 g, and when I met him in Stockholm recently he was of the opinion that the maximum g limit would probably be in the vicinity of 100 g. A safety belt should not be designed for a 20 g limit. If we really want to save *lives* we must also accept the damages that may be brought forth by safety belts at g loads higher than 20. The present Swedish standard for safety belts is built on a 50 g limit. Since this standard was put into use in 1958, it has been proposed that this g limit should be even higher.

With regard to the illustrations in the feature, showing the various types of full harness, I would point out that in all cases the shoulder straps are mounted far too near the base of the seat. The Swedish mountings illustrated should be at least 35 cm behind the seat. I am particularly shocked to know that these photographs show, in some cases, demonstration cars belonging to harness manufacturers.

PER-OLF WEMAN
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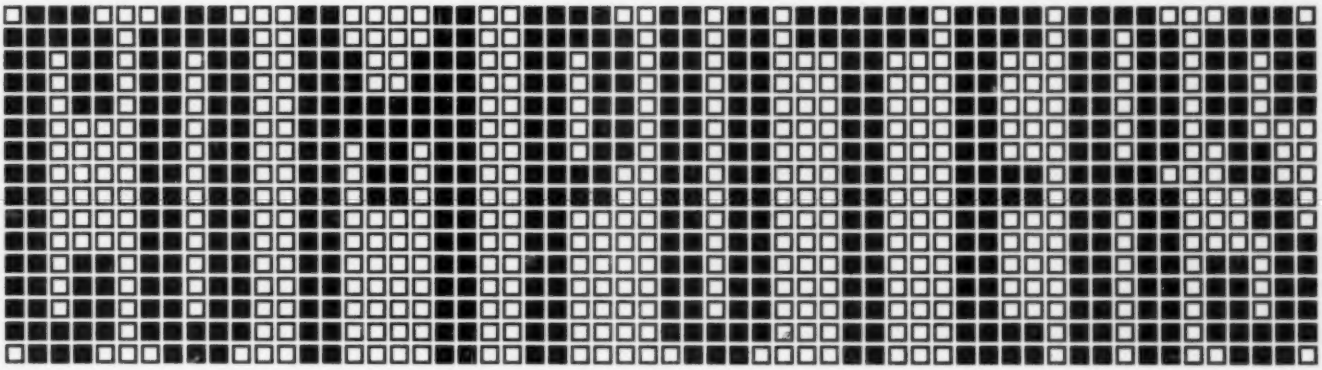
Stockholm
Sweden

Imaginative appearance is a characteristic of new American-designed computers. This article urges British firms to develop better looking designs based on sound ergonomics in the new generation of computers now being developed in this country.

looking at



Computerology has rapidly advanced from the early days when a computer was little more than a black box filled with a rat's nest of wires. Today, an electronics computer can be built up from a number of desk-size units to form a vast, complex system capable of processing many figures in a few micro seconds. So large are the computer systems which can be built that the manufacturer is not merely producing a box of electronic tricks for operators to handle; he is often providing a new business system and a new type of environment for teams of operators.

Manufacturers realising this in part, provide programming services and advise clients how and where a system should be installed; some go as far as discussing the type of building in which the computer should be housed, specifying necessary ventilation requirements, sound proofing, etc. In spite of such shows of concern for their products, few makers examine the full possibilities of human studies, being more often concerned with technical improvement.

It is not the intention in this short feature to discuss the complex human requirements that are essential in the design of large computer equipment. One requirement, however, which is repeatedly overlooked in models designed and produced in this country is the imaginative appearance of the cabinets in which the equipment is housed. Good appearance is perhaps one of the less measurable factors in terms of the benefits it gives to the operator. It is, nevertheless, an important element in the total working environment which the large computer provides.

Barriers to good appearance

The complete marriage of good appearance with sound ergonomics is rarely achieved. Frequently one of these two aspects of the design problem is emphasised to the partial or total exclusion of the other. But good appearance serves an additional function which is of growing importance as the trend increases for large scale computers to be made as modular units rather than special one-off installations. There is a vast international market which is reflected in the complex ties within the industry similar to that in the office machinery industry (DESIGN 131/54 – 57). For example, the IBM

1, 2, 3 and **4** These two British computers, *Leo II*, **1**, and DEUCE, **2**, show the problem of using standard components, some of which have been designed by different firms as separate entities. Both these computers were produced several years ago and were representative of the main stream of British computers. But **3** shows two views of a model of ICT's projected *1301* system in which the individual parts have been designed to relate to each other, providing a more unified appearance. Such unity is apparent in the four-year old American designed *Ramac 305*, **4**, which although a smaller machine for more specialised work, provides a visually integrated environment. An interesting point is the way in which the disc storage unit has been located behind a transparent panel, making the most of the aesthetic character of such electro-mechanical devices. **1** *Leo II*. MAKER *Leo Computers Ltd*. **2** DEUCE. MAKER The *English Electric Co Ltd*. **3** *1301*. CONSULTANT DESIGNER *Noel London*. MAKER *International Computers and Tabulators Ltd*. **4** *Ramac 305*. CONSULTANT DESIGNER *Eliot Noyes*. MAKER *International Business Machines Corp*.

Ramac 305 system, **4**, is designed in America, made at an IBM factory in Germany and is available in Britain. The American RCA *501* is being made in England by English Electric under licence. Its final appearance will, it is said, closely resemble the original American design. Elliot Automation Ltd designs and makes various computer systems which are sold by National Cash Register Co Ltd, an American firm with world wide branches.

In this complicated manufacturing and marketing situation, good looking equipment is becoming increasingly necessary and is already benefiting those firms in the USA which have paid special attention to this point, both in terms of sales success and prestige. The RCA *501* system, **7**, is a good example of the way individual components have been given a strong but subtly detailed visual relationship. The illustrations show a *501* installed at RCA's service centre where, for a fee, computing time can be bought. Blue is the predominant colour in the computing room and in the upper parts of the cabinets, the lower halves being finished in buff. The undersides of the three desk consoles are red, with tops again in blue. While this colour scheme may have been chosen for decorative rather than ergonomic reasons (the bright red, for example,

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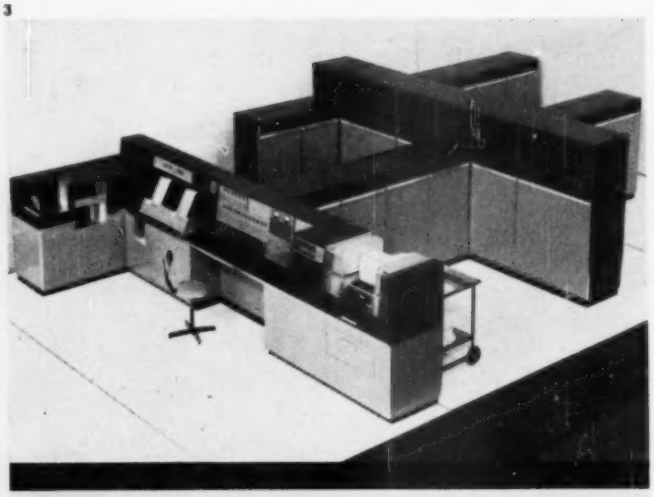

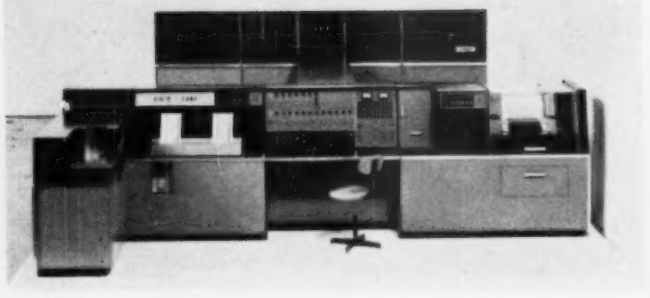

tends to take the eye away from the operating regions) it demonstrates the way in which colour can remove the normal association of computer rooms with a drab, grey, depressing environment.

The *210* system of Beckman Instruments Inc, **6**, another American design, again is well integrated visually and individual items are neatly designed. The strong, unifying framework, to which the front panels are well related in proportion, gives a sense of order which is often lacking in British designs. The repetition of elements which form their own pattern within the frame, and the repetition of the frames themselves, continue a development towards a distinct computer aesthetic discussed by J. Christopher Jones four years ago in *Anonymity and Repetition* (DESIGN 98/37 – 41).

British electronics firms often use stock items for input and readout devices, ie punched or magnetic tape and punched card machines. The computer manufacturer therefore may have little say in the final appearance of the device. Thus it may be unrelated to the rest of the electronics equipment as, for example, in the DEUCE installation of English Electric at the company's aviation laboratories at Warton, **2**. The Leo installation, **1**, at the maker's service centre again emphasises this point, the units having been designed as separate items rather than part of the complete system. The drab appearance of these British computers is evident from the illustrations.

Taking a broad view, it seems that external appearance of large systems is considered more closely by firms which are either wholly or partly American in origin. While it is appreciated that the need to use standard components, in addition to the complicated sales outlets for computers, inhibits the achievement among British firms of more satisfactory looking products, the knowledge of American work in this field should make manufacturers in this country increasingly aware of their own shortcomings. It has been suggested above that, excellent though the American computers are in terms of visual design, the results have sometimes been achieved at the expense of sound ergonomics. The opportunity exists in a new generation of British computers now being developed for ergonomic principles to be used as a firm foundation on which a more imaginative approach to appearance can be built up. In fairness to the electronics industry it must be said that present British computer designs are in a state of flux. But, as overseas competitors have already progressed beyond this stage, this situation serves only to emphasise the need for careful thought and prompt action.

continued

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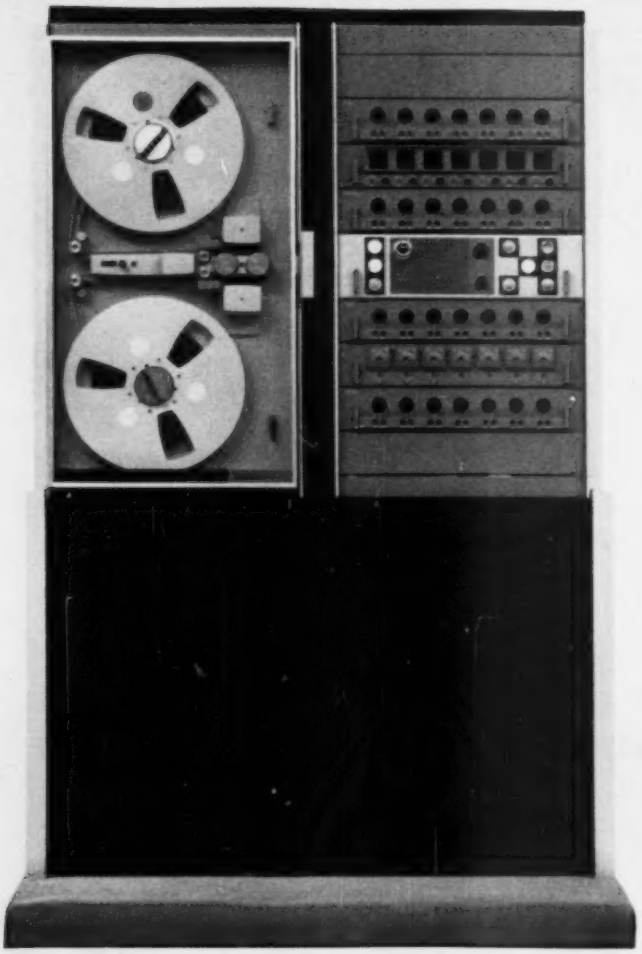

5 One of the most outstanding of the stock input/output devices currently on the market is the American designed *FR 600* data recording device. Recently this product, by the firm's designers Frank T. Walsh and F. Arden Farey, won an award in the first of the annual *Awards for Achievement in Product Development* sponsored by the American journal *Product Engineering*. The team of six judges remarked upon the cabinet construction which "was designed so that its features could be adapted to other products". With such a product this is, of course, an essential. MAKER *Ampex Corp.*

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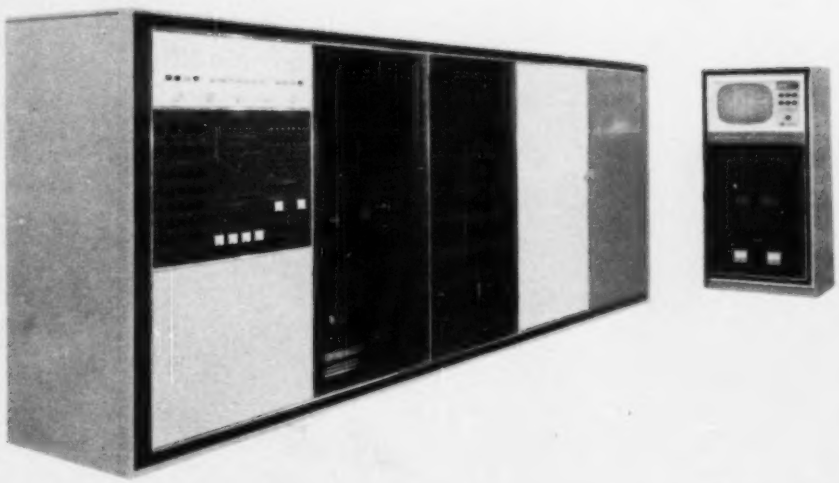

6 Two units from the Beckman *210* system show how the plug-in printed circuits in the two central panels of the main cabinet are deliberately revealed to provide a formal pattern which is already developing into a distinctive computer aesthetic. All units are housed in cabinets of immaculate simplicity. MAKER *Systems Division of Beckman Instruments Inc.*

7 With the RCA *501* not only are the individual units well designed, TOP, but the whole environment has been conceived as a pleasant place to work in. The value of a computer as a symbol is emphasised by the glass panels, BOTTOM, through which visitors can see the computer in action at RCA's service centre. MAKER *Radio Corporation of America.*

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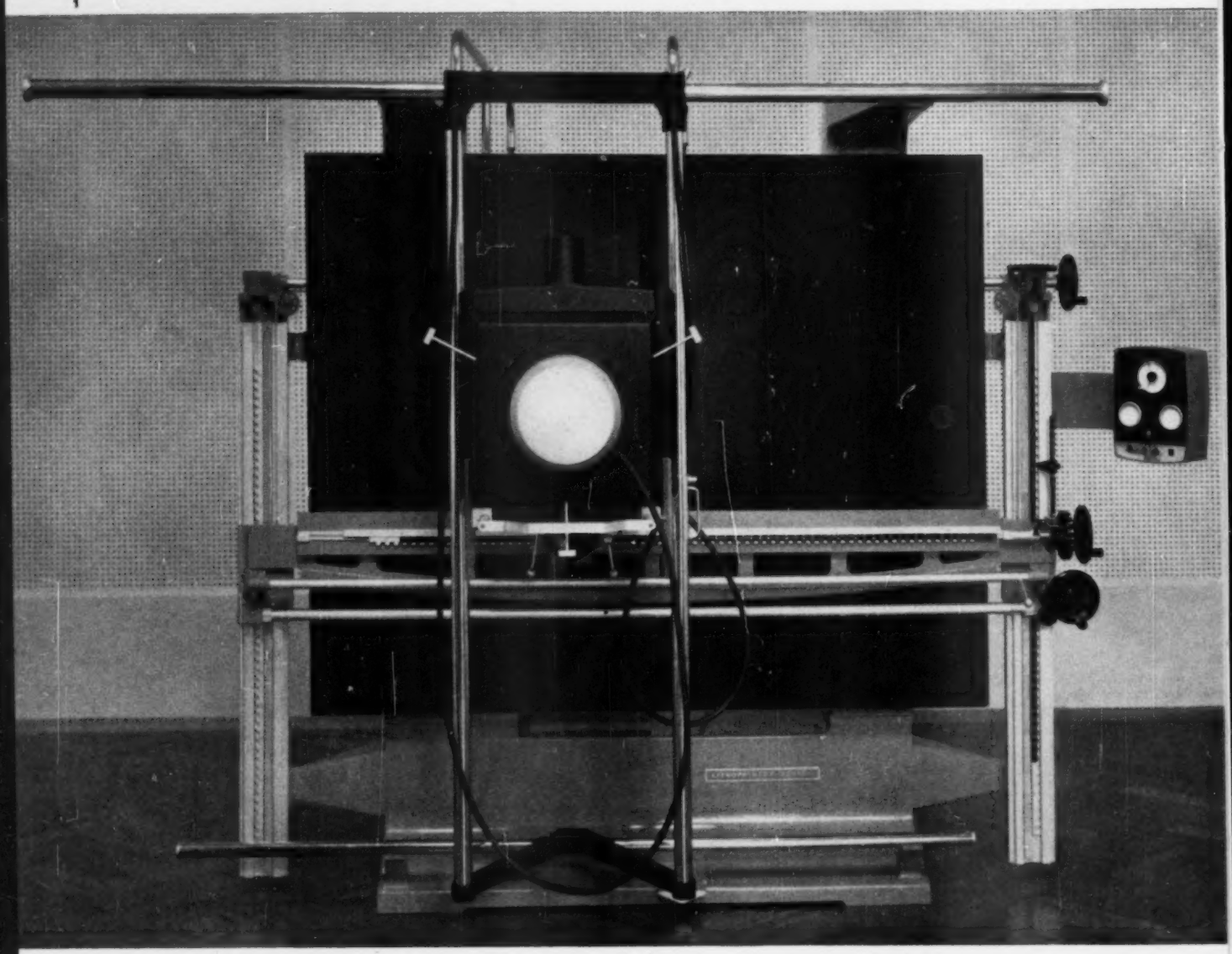

Refined detailing of components expresses operational precision in new

STEP AND REPEAT MACHINE

W. H. MAYALL

The process of printing repeated images by lithographic methods has become more widespread, particularly with the growth of packaging media: cartons, labels and the like. For such purposes there must be not only perfect colour registration, but also, on the printing plate, extremely accurate alignment between images. A good example, in another field, is the reproduction of postage stamps.

Machines which photographically expose negatives, or positives, on to sensitised sheet are commonly known as step and repeat machines, the description defining their essential capacity for accurately reproducing images at prescribed positions across the sensitised area.

The *Lithoprintex Senior* recently introduced by Pictorial Machinery Ltd, a subsidiary of the Monotype Corporation, is just such a machine. It has been developed from a smaller model, the *Junior*, to allow for the more versatile applications possible with a larger machine.

Unlike the majority of step and repeat machines, the sensitised plate is held vertically by air pressure against its mounting board and, again unlike the

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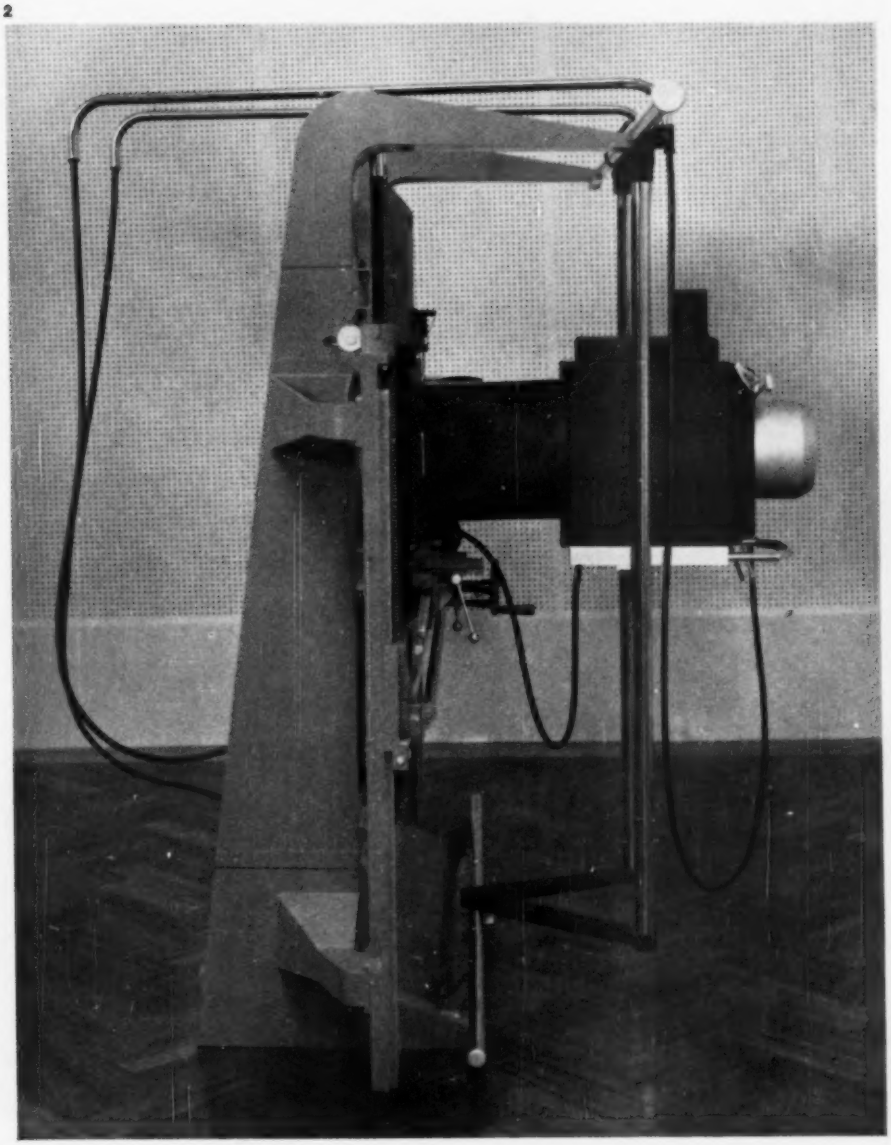

3 The neat casing of the control box is evident here but the designers had to use standard instrument dials which betray faults in ergonomics (DESIGN 133/28-35) and are out of keeping with the modern elegance of the machine.

majority of step and repeat machines, its design was carried out with the assistance of a firm of consultant industrial designers – Wilkes and Ashmore.

A vertical unit, particularly for large plate sizes, has considerable advantage over a horizontal machine, both in saving floor space and in permitting easy operation access; factors which can be clearly noted from the front and side views, **1** and **2**.

The vital requirements for accurate reproduction are rigidity in construction, an accurate positioning system for the negative holder and a perfectly flat surface on the sensitised plate. This last requirement is met by exhausting air between the plate and the rubber surfaced slate base on which it is placed. The negative holder, mounted on the arc-light housing and carried on rails, top and bottom, is also suction-held to the plate in order to ensure perfect contact between negative and sensitised plate. One ingenious feature of the machine is the neat manner in which the air line and electrical leads are carried to vacuum pumps and transformer at the rear through the horizontal conduits which move on pivoted rollers on the top of the unit: a method which maintains the essential ease of access to the working area.

The setting system employed for repeating images enables the operator to set up for another exposure while one is being made, and thus operation is continuous once the setting locations have been determined. Exposures are regulated by a timer located with all other main controls, vacuum pressure gauges and on-off switches, on the conveniently situated control box to the right of the machine, **3**. Settings made by scale and vernier reading on vertical and horizontal members can be clearly made but suggest that a digital counter system of recording might be possible. Such a counter would, however, be expensive as it would be required to read to four decimal places.

With much of the machine already determined, Wilkes and Ashmore concentrated largely upon augmenting an already well based conception. This they have done clearly in the form of the control box and in the excellent detailing of components. Their work has certainly added to the impression of refinement which the machine shows and which it does in fact give in operation.

Overseas review: USA

"Many of our major appliances give you the feeling that you can climb in and drive away." So said Henry Dreyfuss speaking recently about that 'automative look' in kitchen appliance design. 'Detroit Jazz' is said to predominate among such devices. Just how far these trends have muffled any progressive ideas in the latest packaged kitchen and equipment designs in the US is described by DESIGN*'s American correspondent,* LAZETTE VAN HOUTEN.

compacted kitchens

Kitchens in the United States are responding to a constant barrage of seductive advertising aimed at helping the women of America to realise their dreams. Assaulted on every side by women's magazines, model apartments and houses, in retail stores, on the radio and television – women get a constant graphic description of how life can be enriched, invigorated and made easy by the fulfilment of their kitchen dreams.

Appliance and kitchen cabinet manufacturers have concocted fabulous kitchen interiors of every style from Provençal and early American farm kitchens complete with fireplace and rocking chair, to the slickest versions of twentieth century design. The popularity of the open floor plan has brought the kitchen into the living room or vice versa, a 'boon to Mother' who nowadays, more often than not, is her own cook and dishwasher.

Today any woman with enough money for the down-payment can build her 'living kitchen' around her favourite colour, assured that her appliances will match. She can be tempted by a variety of hues and a selection of wood finishes.

◀ **1** A version of the pull-out drawer cooker, the *Fabulous 400* by Tappan, has a maple front working surface, two ovens and 'Set N'Forget' hot plates.

Packaged kitchens are offered by appliance and cabinet manufacturers. Kitchen planning specialists have sprung up all over the country and are virtually doing an estate office business. Interior designers and decorators are designing custom kitchens (not in the down payment category) of the kind stressed in women's magazines, which show an enviable lady in evening dress barbecuing a chicken. On the other end of the scale, do-it-yourself cabinets are available in every style, if the man about the house is gifted with hammer and screw driver. Cookers and refrigerators are now obtainable in medium prices to fit into wall arrangements of standard cabinet sizes. And one appliance manufacturer is offering the services of a well known colour specialist to help the budget conscious amateur with her decorating schemes.

To keep this kitchen enthusiasm at its present high pitch, manufacturers continue to 'improve' their products. Recognising that unless they come up with improvements on the old (while they develop brand new concepts) they may break themselves in a price war, and each season thus brings a race for improved designs.

Built-ins and the built-in look for portable units now head the list of popular requirements in both gas and electric cookers. There is hardly one major cooker manufacturer who has not yet produced built-in oven and burner units. Just as necessary in every line, it seems, is a movable cooker with straight sides that can tuck cosily in between two cabinets to achieve the proper look.

Fold away

Now that the kitchen is so often a part of the general living area, probably the newest quirk in cooker design is to camouflage the units. Tops fold up to become back splashes at cooking time, or give extra working top space when the stove is not in operation. With the same idea in mind – and carried many steps beyond – a cabinet-like unit with a pull-out drawer containing the burners was introduced. When not in use you can hardly tell there is a stove in the room. This was obviously regarded as such a forward stride in removing the kitchen appearance from the kitchen that a number of other manufacturers hastened to bring forth their versions. Law suits are one result of this design direction. Burner units which fold up are a variation on this theme. These fold-up, tuck-in units, together with their ovens, are also made to hang on the wall.

If these new stoves are any indication, the women of America are now cooking and baking more from scratch than from can and freezer. Two oven ranges are *de rigueur* in every line: one for the roast and one for the pie. Barbecue units in ovens are standard equipment. The 'cook-out' has come indoors. One new cooker has a barbecue on the top surface which, by means of specially treated ceramic coals, is guaranteed to give a steak "that real outdoor flavour".

Most operations are done by push button control. Picture window oven doors leave nothing of the roast to the imagination. Pull-out drawer burner units have maple cutting boards attached. And pot watching is antediluvian. Every new range of merit has some sort of gadget that allows the cook to put on the beans and not think of them again until she wants to dish them up. Clock controls on ovens are, of course, expected.

Electronic cookers are in a number of lines. They are not cheap but they are here for those who can afford 'the stove of tomorrow' today.

Refrigerator designers are equally intent to invest their products with time and energy saving devices and a built-in, no-fridge look. Straight sided, they fit snugly into a cabinet wall and new technical and material discoveries have made it possible to build them with thinner walls, giving more cubic storage area without increasing the overall dimensions. One firm has come out with a centre drawer unit which is easy to get into and keeps meat fresh for a week without freezing. Another innovation is swing-out shelves which eliminate the difficulty of reaching items stored in the back of the box. And of course the nuisance of defrosting is completely a thing of the past. All self-respecting refrigerators are now 'frost free'.

Colours to order

The purely decorative touch is not forgotten either. Refrigerators with removable front panels which may be ordered to match accompanying appliances are now on the market. Wallpaper to match the room may also be inserted.

Much thought has been given by designers of both cookers and refrigerators to simplifying the grubby work in the kitchen. One cooker comes with disposable foil oven inserts. Oven doors come off for washing and inside oven units pull out for easy cleaning. Cooker tops are designed for simple removal.

But there is not much news in dishwashers. Mechanically they have improved so that they wash dishes well without previous rinsing. There are now portable units which fit flush with cabinet units; formerly, only the householder ready to invest in a permanent installation could benefit by a dishwasher's services.

Laundry units are also resting on their *status quo*. Here may well be where the industry pushes beyond present barriers. Women seem to be less enchanted by their washing and drying machines than they are with their cooking

and storage equipment. At a recent National Congress on *Better Living* organised by *McCall's* magazine in Washington, the 100 women participating called for washing machines that washed better and did not break down so often. Incidentally these ladies put the stamp of approval on stoves that hide their identity along with their burners. "Fold them into the wall", said the housewives.

Kitchen into living space

Experimentation for the development of tomorrow's kitchen, or more probably, tomorrow's cooking area, is going on at a competitive pace in every appliance manufacturer's laboratory. Thermoelectricity (the Peltier effect), offers great hope though its eventual practicability is not expected for a number of years. Arthur N. BecVar, manager of industrial design, major appliance division of General Electric, thinks that when in general use it will encourage refrigeration throughout the house. Interviewed recently by a national trade paper, Mr BecVar spoke of thermoelectricity's application to medicine chests (for storing antibiotics), bars, clothes closets (for storing furs) and air conditioners which would be silent because of no moving parts. He also sees it as changing present systems of food refrigeration; separate drawer units, for instance, would be possible. The lightweight quality of thermoelectric plates makes such units as portable refrigerators and portable washing machines practical, which the designer feels will be increasingly necessary considering the mobility of the twentieth century population. He further pointed out that man historically has sought means of lightening his work load. Now designers are faced with the challenge of designing for the leisure that has resulted from work reduction.

Being tested now by consumers around the country are a number of new ideas which show the direction of design thinking. A short wall of all the necessary kitchen appliances may be used as a room divider; neat, compact and when not in use, quite anonymous in its appearance. A *Swedish Modern* range is in reality a free standing table with oven and burners. A 6-feet long *Gourmet* serving centre is also free standing and consists of two sections, one for cooking, one for refrigeration. To emphasise its living room appearance, it is finished in walnut and antique leather. A compact laundry centre has a wood finish. Combined freezer and electronic cooking units which bear no resemblance to freezers and stoves enable the cook to put in whole frozen meals on one side and bring them forth ready to eat on the other. Due to thermoelectricity a contemplated design of refrigerator looks more like a modern china cabinet.

If these designs correctly forecast the future it will be hard to tell the stove from the refrigerator, the dishwasher from the freezer. The kitchen of tomorrow will be simply an integral part of the whole living space.

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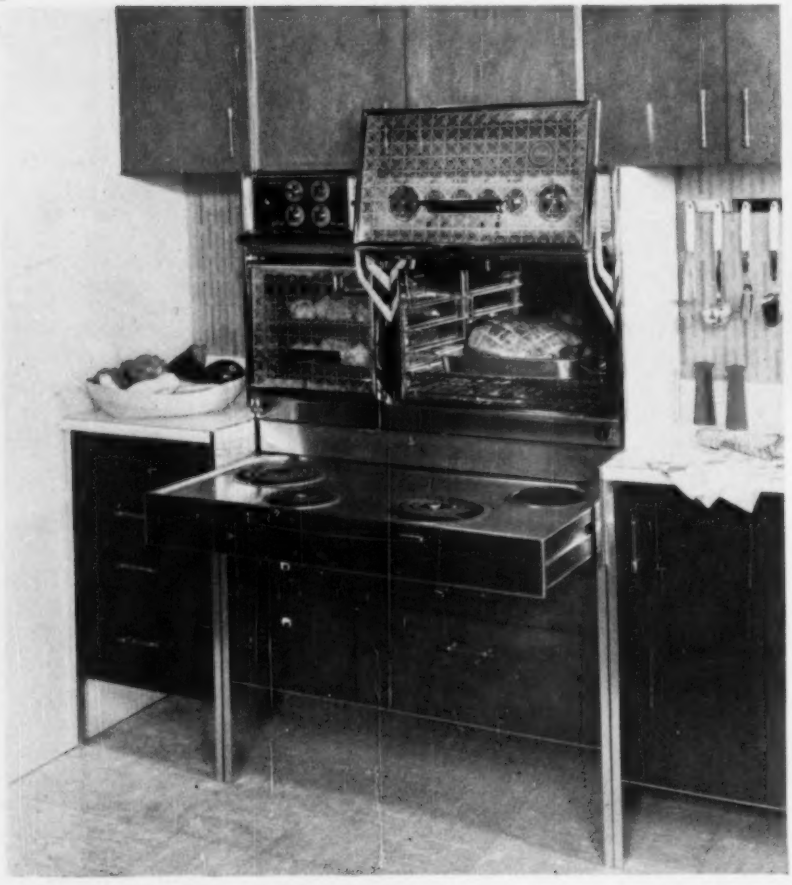

3

2 Although the *Flair* electric cooker, **2**, looks like a built in type, it is, in fact, free standing. This model, by Frigidaire, has a pull-out cooking surface and oven doors which move upwards out of the way.

3 Kitchen cabinets are made in all popular styles. At present heading the list is the Provincial approach, a representative design being this one by Youngstown Kitchens. Steel cabinets have laminated wood finish.

4

5

4 The new Hotpoint counter top oven is equipped with a drop down hot plate unit. When not in use the four-plate cooking surface folds up uncovering the working surface on which it rests.

5 Predicting future moves, Hotpoint is, at the moment, consumer testing the electric-cooker-with-the-furniture-look. But it seems strange that this manufacturer who has pioneered some of the more advanced ideas in kitchen appliance design should have chosen such dated elements in the furniture as the exaggerated splayed legs.

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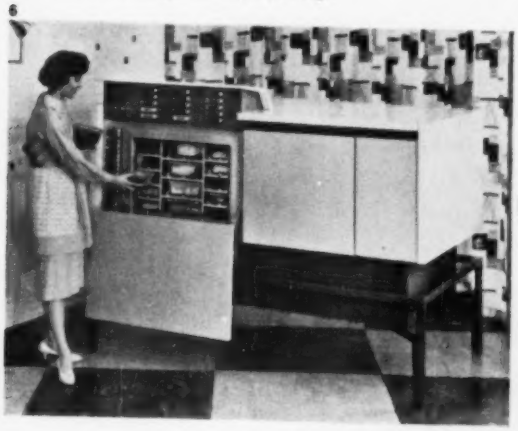

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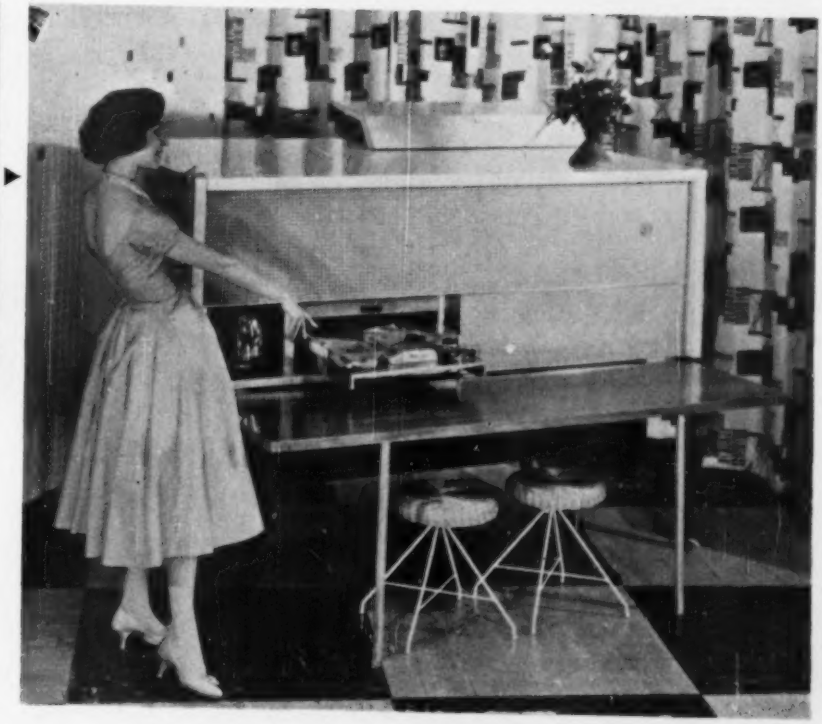

6, 7 Two views of an experimental *Programming Cooker*. The meals are automatically transferred from the refrigerated part, **6**, to the cooker, and when ready slide out of the back, **7** to be served. General Electric is developing this device. (See also DESIGN 104/49.)

continued

8 A convenient centre drawer in the latest Westinghouse refrigerator is said to keep meat fresh for a week without freezing.

9 One idea for the future is the experimental laundry centre, taking only 60 × 25 inches space. Models are now being consumer tested by Westinghouse.

10 The thermoelectric refrigerator, is Westinghouse's conception of tomorrow's design. Free standing on a chrome base and with double doors it may eventually be found in many living areas.

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11 A typical built-in gas counter unit, the *Ranchero* by O'Keefe and Merritt, is shown here. In the wall, *left*, is a built-in gas oven which received a good design award at the *California Design Exhibition*.

12

12, 13 and **14** Waste King, which has only recently entered the cooker market with the Universal models can supply a drop-in electric cooker, **14**, or gas or electric built-in ovens **12**. The cooker has controls on the top surface for hot plates and on the front for the oven. The built-in oven has controls mounted on the front above the door, **13**, dial numerals being painted on the skirt of an illuminated glass panel to simplify reading from above. Henry Dreyfuss designed these models.

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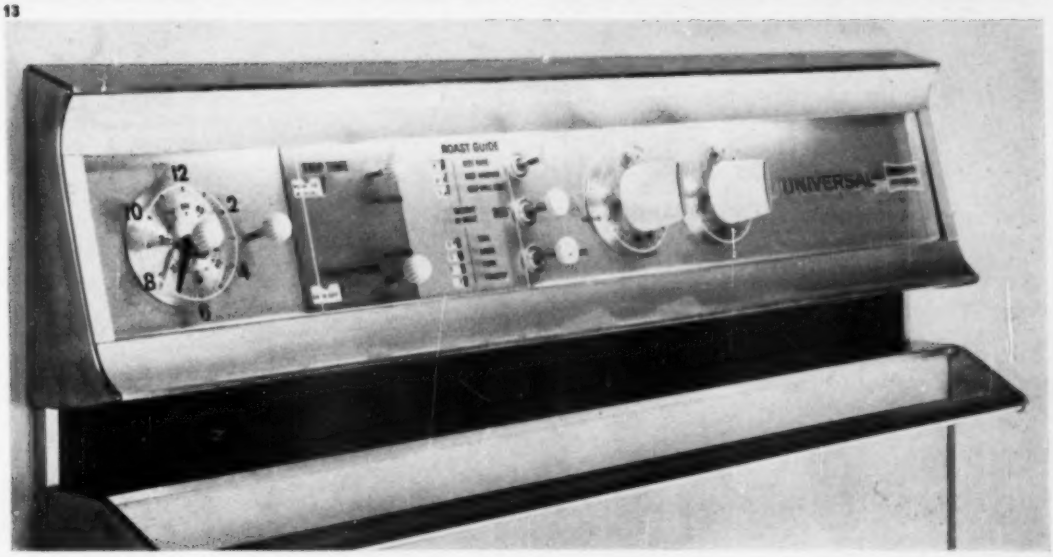
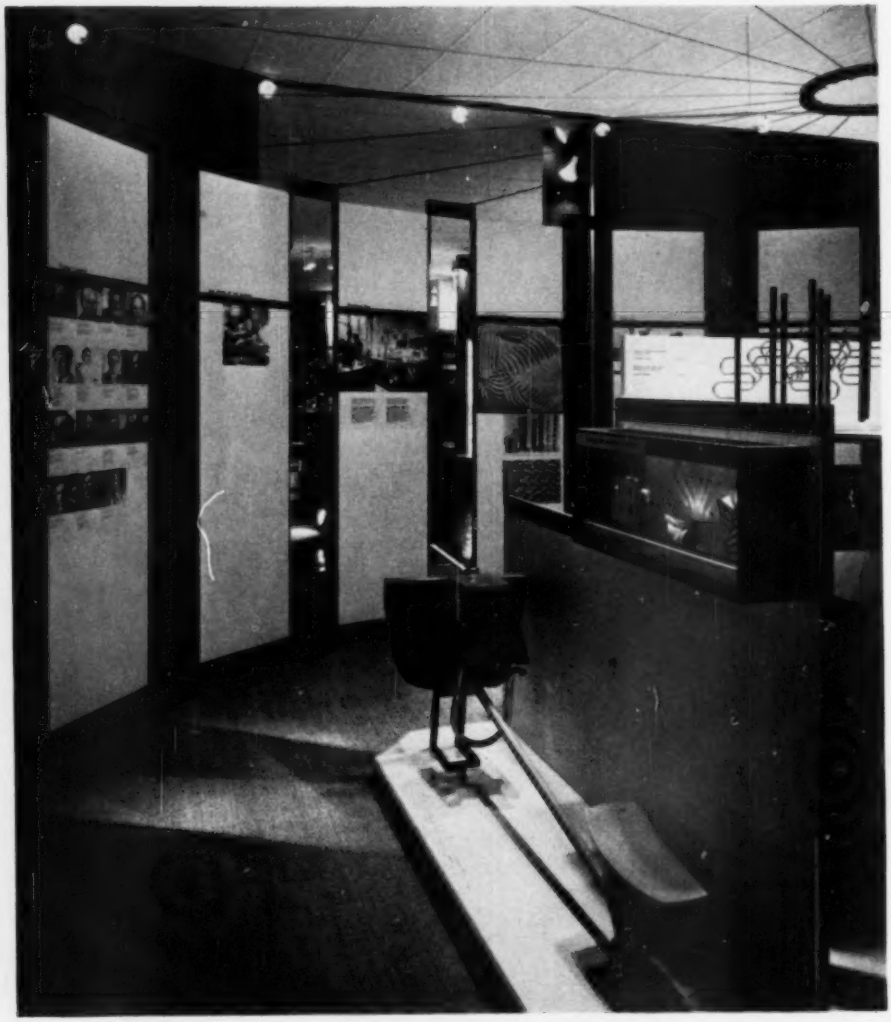


DIRECTIONS

A miscellany of new products and ideas from abroad



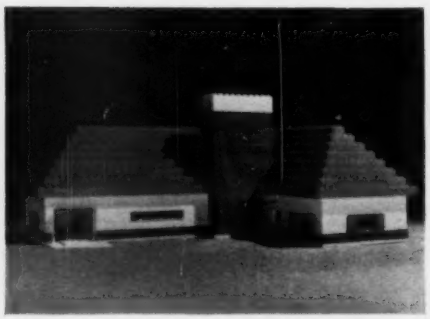
Italy: RCA exhibit

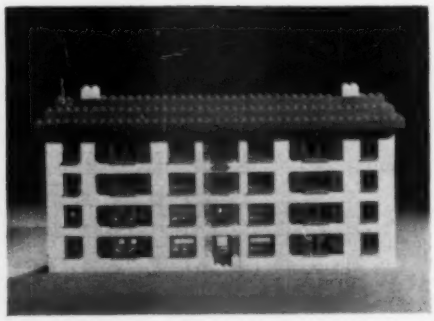
At the *Triennale* (reports of which were published in DESIGN 143/68 – 75 and 144/56 – 61) the Royal College of Art exhibited some of the work of its School of Industrial Design (Engineering). The stand, designed by Professor Misha Black and Frank Height, took the form of panels arranged in a circle on which were photographs and texts describing the college's general work. Inside the ring were to be seen prototypes and products which members of the various schools of industrial, furniture and silversmithing design have produced. Members of the School of Graphic Design assisted with photographs and typography for the RCA's display. The exhibit was awarded a silver medal by the *Triennale* international jury. It was one of the six awards which British exhibits gained.

Denmark: constructional toy

Lego is an ingenious constructional toy consisting of accurately moulded plastics components. The basic constructional unit is a hollow brick with studs on the outside and locating indents on the inside. This arrangement, coupled with high accuracy of manufacture, allows a finished model to be substantial enough to be played with. All tools for the production of the modelling components are designed and manufactured on the company's premises. Models which can be built from the parts are designed by qualified architects at the factory. Lego is, in fact, being increasingly used as an architect's modelling medium.

MAKER Lego Systems A/s. ROBERT SPARK





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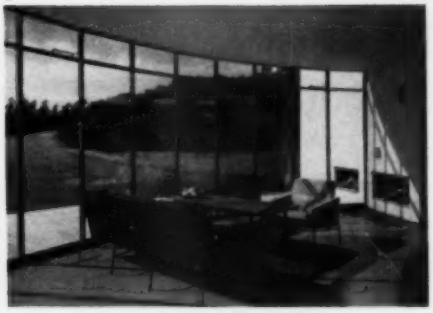

Denmark: two houses

Among Professor Arne Jacobsen's many designs are two single family buildings of particular interest. The 'round house', **2**, built on the island of Zealand is the first circular house in Denmark. The design is remarkable in many ways. Around a central hallway the rooms radiate towards the periphery of the building. The dining room, **1**, next to the kitchen, has no external windows, but a domed skylight provides daylight. Much of the furniture was also designed by Professor Jacobsen, such as the dining room chairs and tables. For the most part the interior design is spartan but sophisticated as can be seen from, **3**, a view of the living room.

A more recent design by Professor Jacobsen is a house on the Sound coast, between Copenhagen and Elsinore. Of more conventional shape, the house has three wings forming an open courtyard, **4**. Again the interior design is in an essentially ascetic style with a few pieces of furniture and white, naked walls. A half-height wall separates the living and dining rooms, **5**. One end of the living room overlooks the sea, with an outdoor stairway leading to a library.

TORSTEN BOHEMAN

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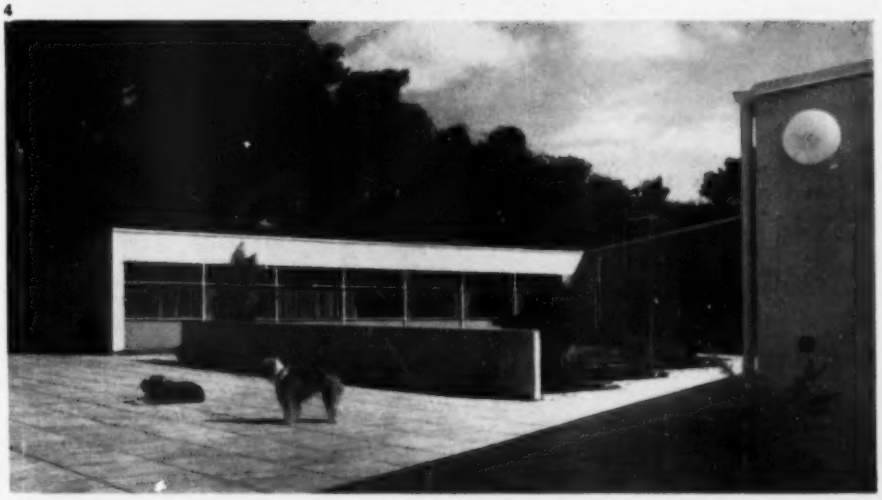

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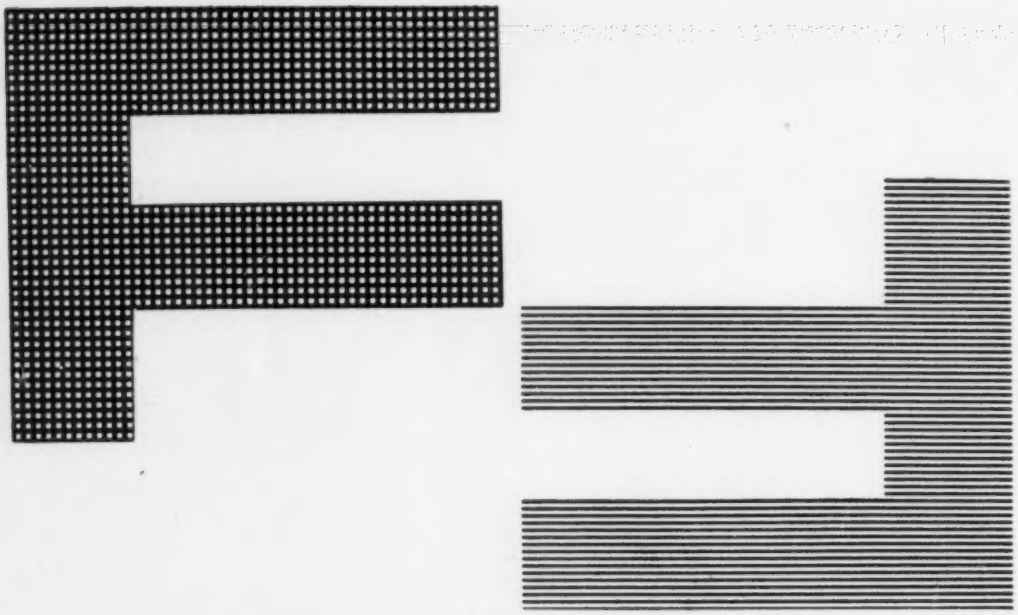
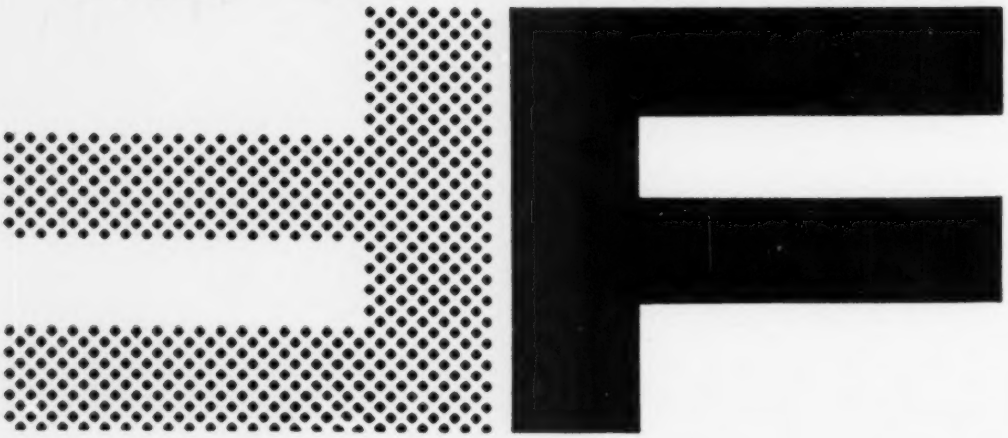


THE FURNITURE SHOW 1961



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Works wonders

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The most striking thing about the three factory canteens that the Conran Design Group has redesigned for Gillette Industries Ltd is that they do not look like parts of a factory.

They are clean-lined and utilitarian, but they still manage to create the impression that conversation and good food will not be out of place. Two of the canteens are at Reading, one for office staff, **1**, and one for factory employees, **2**; the third canteen, **3**, is for executives at Gillette's main UK plant in Isleworth.

The unusual step of hiring a designer to work on an industrial canteen was taken by Gillette after a company executive had been favourably impressed by a restaurant interior he had seen in London. When it was discovered that Terence Conran was the designer he was called in for consultation. Mr Conran was allowed a free hand, and his ideas for a new look were accepted with minimum difficulty.

He has used free-standing partitions in all three canteens to break up and re-arrange the visual impact. One of these partitions, **1**, is decorated with a photostat enlargement of a flower engraving, giving lightness to a room that would otherwise seem slightly grey. A partition in the Isleworth staff canteen, **3**, has a bow-like curve and a corrugated surface. These give a flow and a texture that allow the floor and the furniture to be stark without being institutional. Two more partitions in this canteen partially enclose a space that not only becomes a dining area within the main dining area, but gives added privacy to the tables around it. This is achieved without impeding serving staff in their trips to and from the kitchen. Furniture made and designed by the Conran group replaces the original tables and chairs. Attention to detail goes as far as the plates, cups, cutlery and table-cloths, which were all chosen by Mr Conran.

"I was horrified at the waste involved in throwing out all that cutlery and china", said a Gillette executive. But he now agrees that it was worth it. "This place used to look like an old railway dining room", he says: "but now it's a very pleasant place to eat in".

JAMES W. MCLEAN

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PEOPLE

A new series about people in the world of design

John Gorse

William Johnstone, who has recently retired as principal of the LCC Central School of Arts and Crafts, came to London from his native Scotland in 1930. His qualifications as a teacher of art were not recognised south of the border, and he worked as a part-time teacher in elementary schools. Fortunately Reginald Tomlinson, then the art inspector of the London County Council, realised that Mr Johnstone was a man of outstanding ability, and he was appointed to teach design to apprentices at the Regent Street and Borough Polytechnics and to lecture at evening institutes. In 1938 he became principal of the Camberwell School of Arts and Crafts where, despite the many problems of the war years, he gathered a distinguished body of practising artists and craftsmen. Many of this circle followed him when he was appointed principal of the LCC Central School of Arts and Crafts in 1946.

Immediately he was called on to plan for the large number of men and women receiving Government grants for further education. He rose to the challenge, and although parts of the building were still out of use as the result of bomb damage, he enlarged all the departments, especially the department of industrial design. This was a moment when there was a national need for better designed goods for the export market; his appointment followed shortly after the formation of the CoID, of which Mr Johnstone was later a member. From his student days in Edinburgh he had been a disciple of William Lethaby, the first principal of the Central School, believing whole-heartedly that art needed to be married to industry in the age of mass production. Mr Johnstone has proved that this can be done. He has divorced art-school training from the former 'arty and crafty' taint with which many industrialists smeared it, and by gaining the co-operation of some of the biggest figures in the industrial world, has shown what an essential part it plays in Britain's export trade. His former students are today designing for the electrical, plastics and similar industries, designing textiles and furniture, making contributions in advertising and book production, and leading the country in designing costumes and scenery for the stage, cinema and television.

He kept in touch with each individual student and took a personal interest in finding them the right kind of employment when they left. Prizes and competitions are regularly won by his students in national and international competitions.

The reputation of the school draws students from all parts of the world. Mr Johnstone realises that the presence of those from Africa and India, Europe and the Far East, USA and Australia, has a stimulating influence on the young men and women from all parts of Britain. Mr Johnstone, a forceful character, fights hard to achieve all that he believes in. During his 14 years as principal he has been given every encouragement by the LCC, which is responsible for the school, and has been helped by a keen committee of governors.

He is not only a teacher and administrator: his colourful and exciting paintings are found in the galleries of many countries, and his one-man shows in London arouse keen interest among the critics. He will be devoting more time to painting now that he has retired, in his studio in Kensington which once belonged to Holman-Hunt. But he will spend only part of his time in London; the rest of the year he will spend in Scotland where he has a farm and where, following the tradition of his father, he will be engaged in breeding sheep and cattle. He should find happiness in combining two creative needs of man – painting pictures and farming the soil, dividing his life between the country of his birth and the most civilised city of the modern world.

HELEN BENTWICH

Some well-known ex-students of the Central School now designing for industry

Alan Bednall, free lance designer; student at the Central School from 1948-51; consultant designer to Pye Ltd and Burco Ltd.

Martyn Rowlands, free lance designer; student at the Central School from 1946-49; formed the industrial design department at Ekco Plastics Ltd – his baby bath design gained a *Design Centre Award* in 1958 (DESIGN 114/27).

John Drummond, free lance designer and senior tutor, School of Textile Design, Royal College of Art; student at the Central School from 1946-49.

James Mortimer

Colin Forbes, free lance graphic designer; student at the Central School from 1949-52; consultant art director, Pirelli Ltd; head of department of Graphic Design, Central School, 1957-59.

Terence Conran heads his own design organisation, manufacturing as well as designing furniture, fabrics, etc; student at the Central School from 1948-50.

Martin Grierson, free lance furniture designer, and consultant designer to L M Furniture Ltd; student at the Central School from 1949-53; recently gained an award in an international furniture competition.

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There is no problem like a penthouse problem for the inexperienced; lighting and approaches are just two elements calling for discriminating treatment. Ian Henderson solved this problem at the Connaught Rooms in Central London in the design and execution of the dining area illustrated.
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Reports

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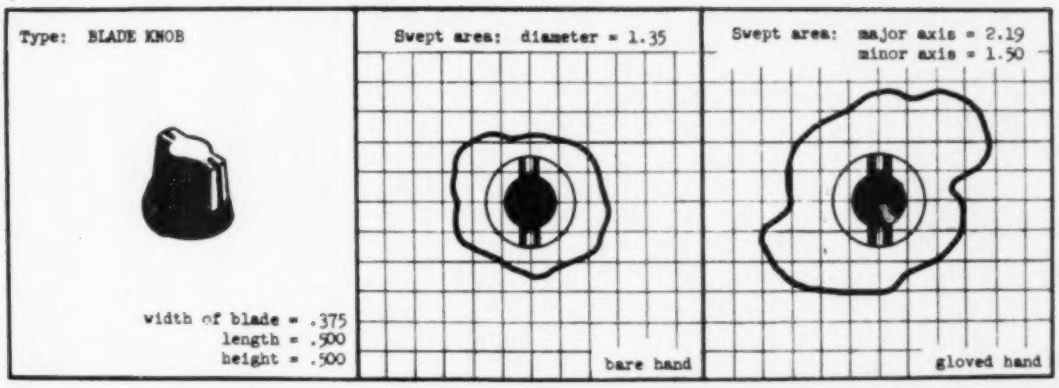

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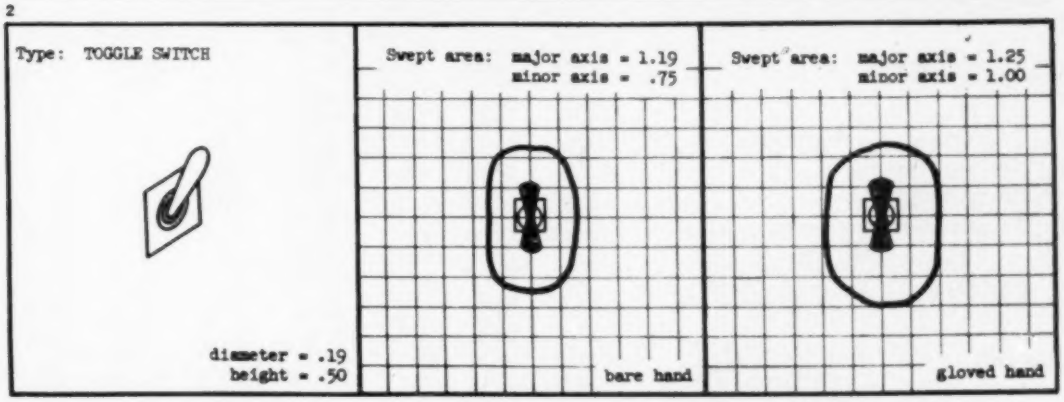

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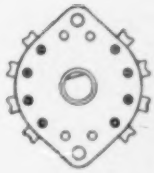

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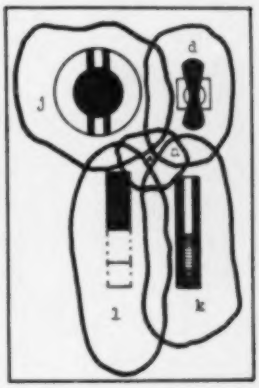

Miniaturisation and the human factor

As communications improve, the world is said to become smaller. Certainly the electronic apparatus which has contributed much to this process has had to become smaller, and the pressure for miniaturisation continues. To meet some of the human factors difficulties which may arise, the American Institute for Research was commissioned by the United States Army Signals Supply Agency to produce a report on the problems which arise from the use of miniaturised equipment.* The report aims "to serve two main functions for the intended audience, the electronic design engineer. One of these is to provide him with a source book to which he can refer for help in solving human engineering problems associated with the design of miniaturised equipment. The other function is to bring to his attention some of the problems created by miniaturisation, and an appreciation of factors that must be considered in their solution".

A RATIONAL GUIDE

The report makes two main contributions of value. Firstly, the seven steps proposed in the section on *Procedure in Human Engineering Miniaturised Equipment* form a rational guide for attacking the problem in a logical and orderly fashion. Secondly, the full-size charts in the appendix, showing the actual swept areas for operation of 16 controls may in some instances assist the miniaturisation of panel layouts.

These charts show the outline of the largest area swept by those parts of the fingers, during normal operation of the control, which are on a level with the top of the control. The charts are derived from measurements of two subjects whose hand and arm measurements approximated to the 95th centile (ie nearly the largest of all arm and hand dimensions). Although the charts thus derived cannot be regarded as completely accurate, they form a useful guide, **1** and **2**. The report then shows how this data could be used to decrease the size of panel required.

PROBLEMS IN PRACTICE

In principle these ideas are sound, and they show how things should and could be done if there are no other considerations. However, in practice, at least in England, the size of reliable electronic components is such as to make these detailed proposals and charts only of practical use in relation to the largest size of controls. If we compare the swept area required by the hand with the size of many of the electrical components to be mounted behind the panel and controlled via knobs etc, we see that in many cases the component itself is effectively as large as the area required by the hand to operate it. For instance the type of toggle switch regarded as reliable enough to be used in computers, which is very little larger than the smallest toggle switch available, is $1\frac{1}{4}$ inches by $\frac{3}{4}$ inches, and therefore takes up the space shown in **3**. Again, one of the latest miniature selector switches is $1\frac{11}{16}$ inches in diameter, and therefore requires the area shown in **4**. If we try to place these together in the way shown by j and d, **5**, we find that the components themselves will not allow of such close spacing. Two deductions are possible: either American electronic components are considerably smaller than their English counterparts, or this detailed part of the report has been prepared without sufficient reference to practical considerations.

In summary, then, this report is of value in providing a general review and in suggesting the kind of logical approach needed to solve the problems involved in the design of miniaturised equipment. For this reason it should be perused by those at whom it is aimed. But the engineers may well fail to derive any value from it, because, being practically minded in essence, they may condemn it excessively for its shortcomings in relation to practical engineering matters.

B. SHACKEL

Guide to Human Engineering of Miniaturised Equipment, report AIR-261-59-FR-202, The American Institute for Research, Pittsburgh, Pennsylvania, for the US Army Signal Supply Agency.

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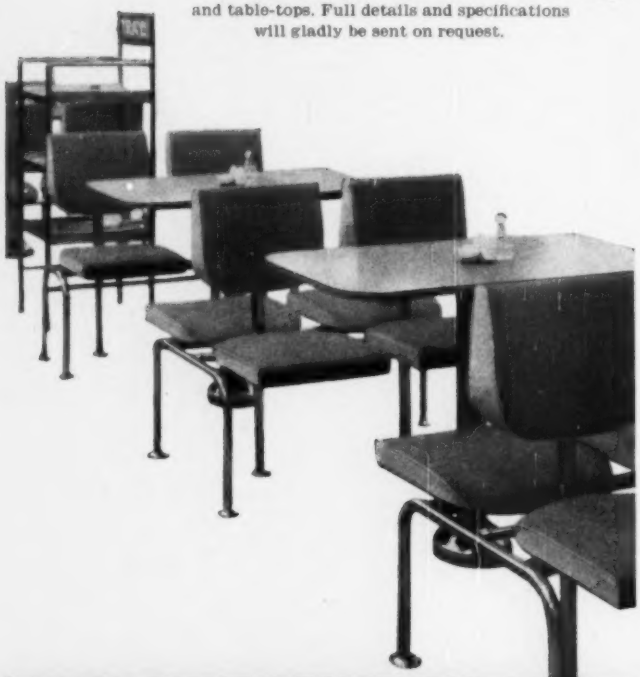

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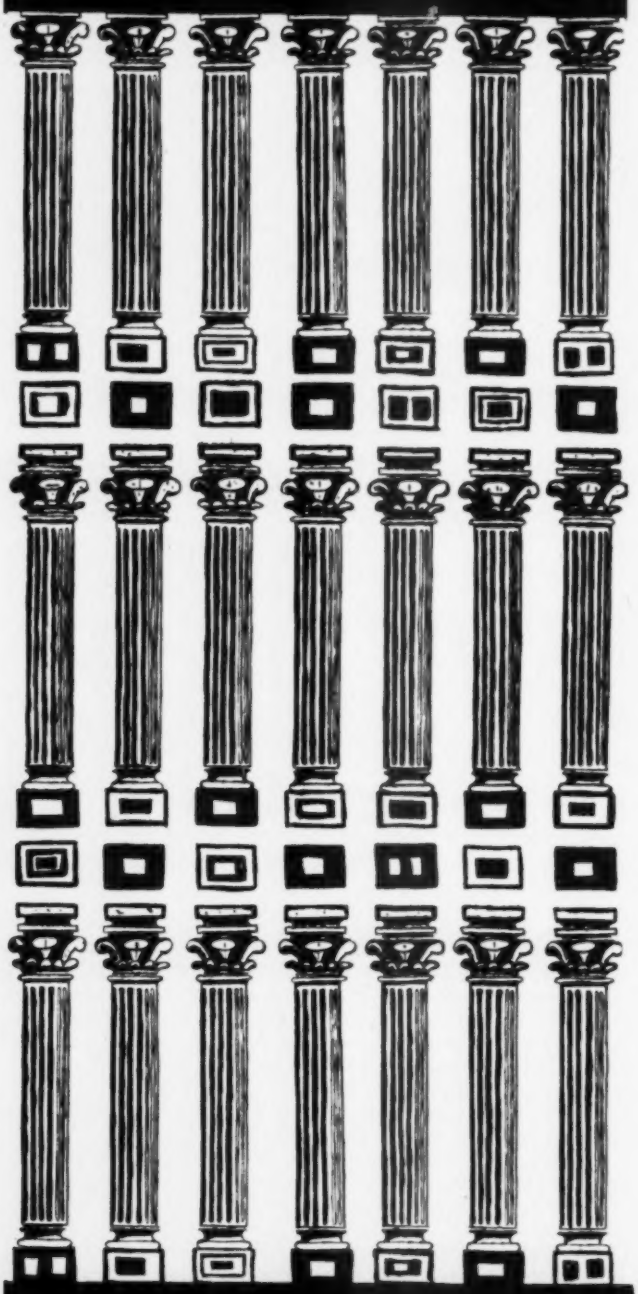

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NEWS

EDUCATION

Art training replanned

Important changes in the structure of advanced courses at art schools and colleges have been recommended by the National Advisory Council on Art Education, under the chairmanship of Sir William Coldstream. Most significant of the proposals is that courses should approximate in standard to university courses leading to a degree. Age of entry will usually be 18 and students will be required to have a satisfactory standard of general education – five 'O' level passes in G C E.

Four basic types of course are proposed – fine art, graphic design, three dimensional design, and textile/fashion design. While art schools will plan their own syllabuses and hold their own examinations, there will be an independent National Council for Awards in Art and Design which will be responsible for approving courses and examination arrangements. It is estimated that between 40 and 60 art schools will have their courses approved and will be able to offer the new diploma in design.

The National Advisory Council's recommendations have been accepted in full by Sir David Eccles, Minister of Education, but it is not yet known when they will be put into effect. A full review of the report, which is available from HMSO price 1s 6d, will be published in DESIGN next month.

TRADE

Selling to Russia

At present one per cent of Britain's total exports go to the U S S R , but there could be a significant rise of the sales graph after May 19 when the *British Trade Fair* opens in Moscow.

The aim of the fair is first and foremost trade. It will promote British exports, rather than a nebulous 'British way of life'. Over 600 firms will be taking part, with the emphasis on capital goods – plant and machinery forms by far the largest category of exhibits, followed by electrical equipment (including electronics and radar, radio and television), scientific instruments, and engineering components, etc. Some consumer goods will be on show – mainly textiles, household equipment, and clothing.

The fair, jointly sponsored by the Association of British Chambers of Commerce and the All-Union Chamber of Commerce of the U S S R , is being organised by Industrial Trade Fairs Ltd; the Board of Trade will have a large stand there, designed and co-ordinated by the Central Office of Information. This stand will feature British achievements in science and technology and will show how the British Government, universities, hospitals and private industry work together on research into the production of modern technological equipment.

The fair will be held on a 23-acre site in the Sokolniki Park of Culture and Rest. The exhibits will be on show in four main exhibition halls. Two were built in 1959 for the American exhibition and two new ones are being erected for the *British Trade Fair*, and the *French National Exhibition* which opens soon afterwards.

As the note on page 22 points out these new pavilions are being designed by Jack Howe & Partners, in collaboration with Andrew Bain. They are working with M. L. Gauthier, architect to the French exhibition and the architects' department of the Moscow Soviet, under architects Wilensky and Vinogradsky. The illustration, ABOVE, shows a model of the two new pavilions for which Jack Howe and Andrew Bain are largely responsible. Most of the stands are being prefabricated in this country, and they will be erected by British workmen in Moscow before the exhibition opens.

A reciprocal *Soviet Trade and Industrial Exhibition* will be held in Earl's Court from July 7 – 29; again the emphasis will be on capital goods, but there will also be cars, textiles, television and radio sets, watches, etc.

Sweden gets export-minded

Sweden's two-year plan to increase sales to this country gives British manufacturers a foretaste of the competition they will be faced with when E F T A agreements get under way. Details have been announced about a two-year selling campaign which will involve between 400 and 500 Swedish firms. Organised by the General Export Association of Sweden in conjunction with the Swedish Ministry of Commerce, the Swedish Embassy and the Swedish Chamber of Commerce in London, the campaign will involve firms producing furniture, textiles, plastics, building materials, engineering equipment, office equipment, glass, porcelain, and kitchen equipment, etc.

Sweden plans to take part in and organise a wide range of exhibitions during the next two years. The first of these is a trade exhibition of Swedish furniture which will be held in the Central Hall, Westminster, from January 31-February 4, and will coincide with the *Furniture Fair* at Earl's Court. *The Ideal Home Exhibition* in March will include products of 40 Swedish firms; Swedish plastics manufacturers will take part in *Interplas* (June 21-July 1), and there will be an exhibition of Swedish building materials at the *Building Exhibition* in November. Smaller, more specialised exhibitions include *Sweden at Home and at Work*, a selection by the Swedish Society of Industrial Design of Swedish furniture, textiles, glass, porcelain, office equipment, office machinery, etc, which will form the basis of a travelling exhibition in 1962.

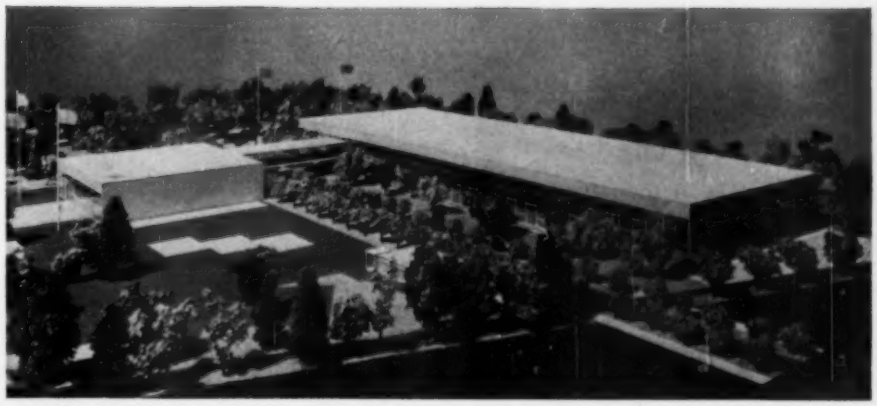
Commercial information about the campaign is available from the Swedish Chamber of Commerce, 14 Trinity Square, London, EC3; all other information from the public relations division of the Basil Butler Co (appointed public relations consultants and co-ordinators of the campaign by the General Export Association of Sweden), 78 Brook Street, London, W1.

OBITUARY

Sir Cecil Weir

Sir Cecil McAlpine Weir, who died last October, was a good friend to the CoID. Indeed he rightly claimed that he was one of its godfathers, for the 1943 *Weir Report on Industrial Design and Art in Industry* was one of the documents that led directly to

continued on page 69



Pavilions for Moscow

A model of the two pavilions for the British Trade Fair *which opens in Moscow in May* (*see* Selling to Russia).

Compasso awarded

Paul Reilly, left, *director CoID, went to Milan recently to receive the golden compasses, the 1959* Gran Premio Internazionale la Rinascenti Compasso d'Oro *awarded to the CoID by La Rinascente, the largest department store in Italy.*

He is seen here with Sir Ashley Clarke, right, *British ambassador in Rome, and Count Aldo Borletti*, centre, *chairman of the international jury which selected the award.*

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the founding of the Council.

The case for the CoID's work has perhaps never been put so clearly as in the second paragraph of that report: "We are agreed that there is such a thing as recognisably 'good design'; that it is necessary to any successful policy for promoting exports of non-fashion as well as of fashion goods, of cheap as well as of expensive; that it cannot be divorced from 'good design' in the home market; that it is possible for a country to achieve a pre-eminence in design which is the best form of collective advertisement; and that good design can often help the economy of manufacture. We do not admit a lasting conflict between 'giving the public what it wants' and good design."

Seventeen years later the CoID is still following the pattern of activity implicit in that statement – pressure on the home market with exports in mind; propaganda to industries with slow rhythms of change as well as to those with faster ones; emphasis on manufacturing economies resulting from competent industrial design; education of public demand and judgement; and lastly the projection of a new image of Britain abroad as a nation with taste, talent and modern imagination. In spite of an overfull business and public life, Sir Cecil Weir still managed throughout his last 10 years to keep in touch with the CoID's work, to visit its exhibitions and to ask searching questions about the progress of The Design Centre – for this was also anticipated in the report which carries his name. P.R.

APPOINTMENTS

Project for furniture

David A. Jay has been appointed products design manager of W. Lusty and Sons Ltd, manufacturer of Lloyd Loom furniture. A product design unit which has been set up to co-ordinate the design and production teams in the company will also be concerned with the manufacturing processes and the development and testing of all products.

Mr Jay trained as a designer draughtsman and after leaving college was employed in the furniture industry; he subsequently became a projects development officer with the Ministry of Supply.

New chairman

Sir William Mabane has been appointed chairman of the British Travel and Holidays Association. He succeeds Sir Arthur Morse, who has been chairman of the association for the past six years.

Design consultant

A. B. Read has rejoined Troughton & Young (Lighting) Ltd as design consultant. Mr Read will continue his association with Carter & Co Ltd, the tile manufacturer, in a consulting capacity.

COURSES AND CONFERENCES

Work study for designers

The Engineering Employers' West of England Association has announced details of its courses for 1961. These include three courses for designers on method study (January 9 – 27; June 19 – July 7; September 11 – 29), and two courses on the design of equipment for human use (February 27 – March 10, and November 20 – December 1). Further details of these and other courses are available from the Secretary, the Department of Work Study and Staff Training, Engineering Employers' West of England Association, Engineers' House, The Promenade, Clifton Down, Bristol 8.

Ergonomics at Cranfield

The College of Aeronautics is to hold a 10-week post-graduate course in ergonomics from January 16-March 24. The course provides intensive training in the relevant sciences and technologies plus a knowledge of current research and application and its location in this country. It is directed either at the recent graduate intending to specialise in this field, or at the more senior person requiring "more than a casual acquaintance with the human sciences".

The fee for the course is £250, including the cost of full board and accommodation in an individual study-bedroom. Further details and application forms for the course may be obtained from the Warden, College of Aeronautics, Cranfield, Bletchley, Bucks.

On the carpet

The annual conference for carpet designers was held at The Design Centre recently. Speakers included architects and manufacturers in related industries, as well as from the carpet industry and the retail trade, and 40 delegates from 20 firms took part in discussions which clearly showed the success of the conference as a stimulus for the staff designer.

Delegates emphasised the design problems the industry is faced with, and the difficult path of a new design *via* buyers and retailers to the public; mention was also made of the paradox that the ultimate choice of a design rests with the public, despite the fact that considerable pre-selection is made at all intervening stages between the designer's sketches and the retailer's displays. There was some apprehension, too, that the industry was becoming a 'fashion trade'; but the general feeling was that a

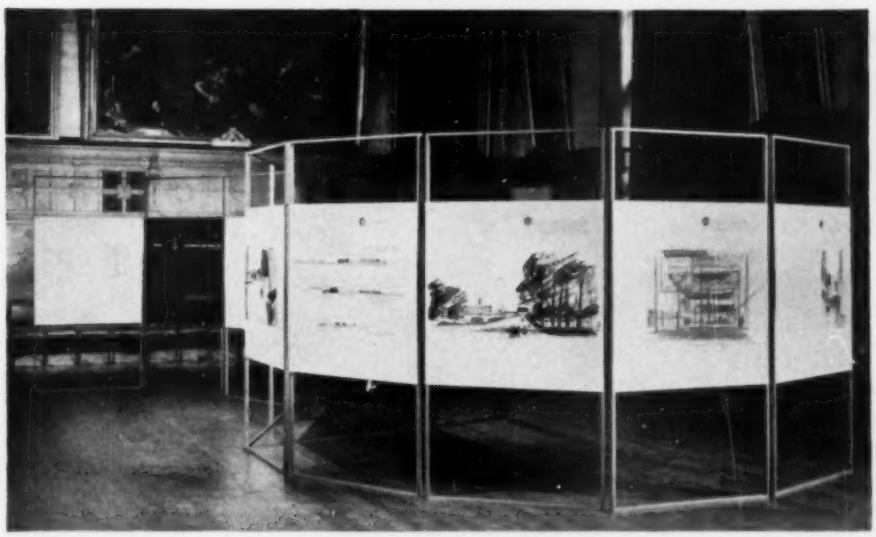
continued on page 71

Independence day stand

A view of the ambitious Western Region Pavilion, which formed part of the Nigerian Independence Exhibition *in Lagos. The pavilion was designed by Leslie Gooday for C D Productions Ltd. The illustration shows the stand at dusk, with lighted calabashes on the main building and a Perspex windmill in the tower, forming a decorative feature.*

University revival

This simple form of display mounting was designed by Derek Birdsall for Townmaker Ltd, and was used in Oxford Town Hall last year to show the firm's proposals for the redevelopment of the centre of the City. The 8 ft × 4 ft frames carrying 4 ft square panels are in African mahogany, joined simply together by brass hooks.



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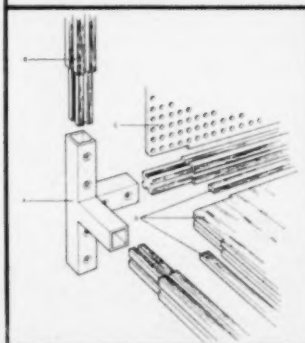

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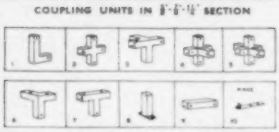

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desire for newness, as opposed to novelty, led to a more imaginative approach to design.

As at the recent Scottish conference for carpet manufacturers (DESIGN 143/79), concern was expressed about the difficulties of attracting the 'right kind' of young designer into the industry; a twin solution offered being the provision both of greater co-operation between the industry and art colleges, and of greater financial inducements and prospects of promotion within the industry.

Lectures in London

Future lectures arranged by the Royal Society of Arts include: January 11, 6 pm: *Ergonomics – Fitting the Job to the Worker*, by Dr C. B. Frisby, director, National Institute of Industrial Psychology.

February 1, 2.30 pm: *Wallpaper and its History*, by E. A. Entwisle, a director, The Wallpaper Manufacturers Ltd.

Both lectures will be held at the RSA's headquarters, 6 John Adam Street, Adelphi, London, wc2. Non-members wishing to attend should apply to the secretary of the RSA for tickets of admission.

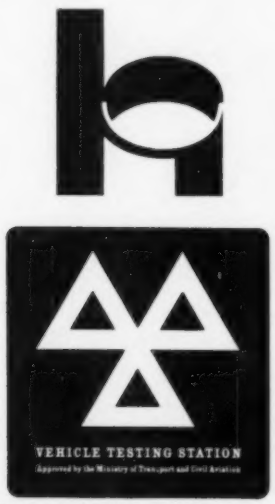
Alistair Cooke is to give the RIBA annual discourse this year – to be held at 6 pm on May 17. At the same time on February 7 Dr Rayner Banham will be talking on the *History of the Immediate Future*. Both lectures will be held at the RIBA's headquarters, 66 Portland Place, London, w1.

COMPETITION

Sign prize

The Electrical Sign Manufacturers' Association has announced details of its illuminated sign competition. Nine cash prizes will be given for the best designs for illuminated sign displays on a modern architect-designed shop in the main shopping centre of a large provincial town. The judges will be Lord Mancroft, Sir Basil Spence, and R. Nicholas, president of the Town Planning Institute, together with the chairman and vice-chairman of the association.

The last date for receipt of entries is January 31. Entrants may offer as many designs as they like. Full details are available from Electrical Sign Manufacturers' Association, 13 Bedford Row, London, wc1.



Paint style and testing symbol

TOP, *a new symbol for Wm. Harland & Son Ltd, paint manufacturer and a member of the Ault & Wiborg group of companies. It was designed by David Caplan who has been appointed design consultant to the firm.*

ABOVE, *the now familiar symbol for the new vehicle testing stations was designed by Jock Kinneir.*

EXHIBITION

Kitchens at the BFM

The CoID is co-operating with BFM Exhibitions Ltd at the *Furniture Show* (Earl's Court, January 30 – February 11) in a display of modern kitchens. Roger Worboys has designed a country kitchen and a small kitchen of minimum practicable size; Clive Latimer has designed a town kitchen, and Ursula Howells a dining kitchen.

MISCELLANEOUS

Design appreciation for engineers

Following the success of the course held at Reigate recently (DESIGN 144/71), a further course for junior engineers from various industries will be held in March and April. The fee for this course will be 35 guineas and application should be made without delay to the Education Section, CoID, from which further details are available.

Designer's award

The Society of Industrial Artists' annual design award has been presented this year to Abram Games.

Operation office furniture

The wood office furniture section of the Office Appliance and Business Equipment Trades Association is launching a campaign to create more awareness of good design in office furniture, among both manufacturers and the general public.

The association aims to establish a wood office furniture advisory panel, a photographic library, an advisory service and a directory of manufacturers. It will also encourage furniture manufacturers to use designers. Further details are available from The Office Appliance and Business Equipment Trades Association, Public Relations Office, Panton House, 25 Haymarket, London, sw1.

Contract in Bristol

Kenneth Stradling of the Bristol Guild of Applied Art, and Peter Cuddon, the designer/manufacturer, have formed a new contract and interior furnishing company in Bristol. The firm will be known as Sparta Furniture Associates.

Copenhagen award

This desk chair was designed by Adrian Heath, a British designer now working in Denmark. It was awarded second prize last year in the Copenhagen Cabinetmakers' Guild furniture design competition.

LETTERS

Function of a building centre

Sir: I feel there is a need to clarify certain remarks contained in your article describing the Manchester Building Centre (DESIGN 142/85), since it tends to add to the confusion already existing in some quarters as to the respective aims and functions of a building centre and a design centre. Both have an important role to play in the dissemination of information, but there is an important difference in approach which must be appreciated if full use is to be made of their services.

You suggest that the centre's policy of impartiality makes it difficult for inquirers to select the best available product to meet their specific requirements. This would seem to be based on a lack of awareness of the problems and considerations raised in such a selection within the building industry. Since the suitability of a particular product depends so much on such factors as distance, availability, quantity and the precise job to be done, it is virtually impossible to be otherwise than impartial. How, for instance, would one select the best plaster, concrete or brick product without reference to these particular requirements? Impartiality concerning products and information must of necessity be a corner-stone of the policy of the centre, since this is essentially a place of reference for a particular industry and must therefore be as comprehensive in its service as is humanly possible. The Manchester Building Centre aims to present all the alternatives to its users so that a reasoned selection may be made for a particular purpose.

The centre has no facilities of its own for testing materials, but if general guidance to quality is required, reference can be made to the relative British Standards, Codes of Practice or to results of research by the Building Research Station and other research bodies.

As to the general classification and grouping of products within the exhibition, there are undoubtedly problems and anomalies, but the Manchester Building Centre in the short time since it opened has endeavoured to achieve a logical and helpful solution in the grouping of similar products.

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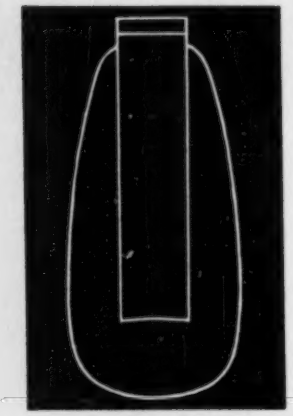

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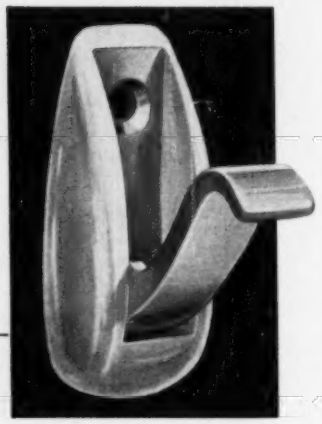

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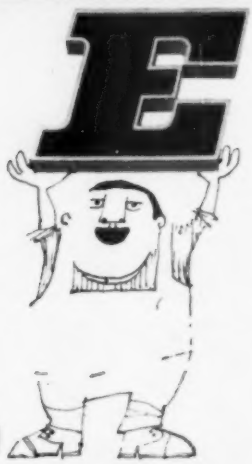

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We are at present employing the SfB system of classification and we hope to relate our permanent exhibition to this. However, the very wide range of products within individual firms raises difficulties which can only be resolved by a correct understanding on the part of such firms and individuals of the functioning of a building centre.

As the centre develops we intend to advance our ideas on all these aspects and to reach a solution acceptable to the centre, its users and, we trust, DESIGN.

PETER RILEY
Technical Officer
The Manchester Building Centre Ltd
115 Portland Street
Manchester 1

Identity for designers

Sir: I was interested to read L. Bruce Archer's report on the recent designers' discussion at the Royal Society of Arts (DESIGN 140/63).

Towards the end of his review Mr Archer refers to the possibility, within the Society of Industrial Artists, of a disquieting and unnecessary cleavage between graphic designers on the one hand and product designers on the other.

This raises a very critical point. In my 12 years' business as a design consultant in consumer and capital goods, and contact with business men in many fields, I have long formed the view that a society with the name British Society of Industrial Designers would better serve the interests of product designers and be more appropriate to product design.

It is not enough that a section exists within the SIA to cover product design. The title 'artist' is not suitable to a man designing engineering products. It is of no matter that he may have the ability in spite of the title. The important point is that it does not convey to the potential client and his staff the impression it should, and a man so labelled carries an added handicap to winning the confidence and respect so necessary to a successful commission.

Although we may be moving towards more enlightened management, the word 'designer' still means different things to different people, and until the profession begins to clean up some of the confusion within its own ranks little real progress is likely to be made. A first step in this direction should be the division of the graphic and product designers, the title 'Society of Industrial Artists' being retained for the benefit and identity of graphic designers, and a 'British Society of Industrial Designers' to identify more accurately engineering product designers. Anyone really qualified in both fields – and they are few, could belong to both societies.

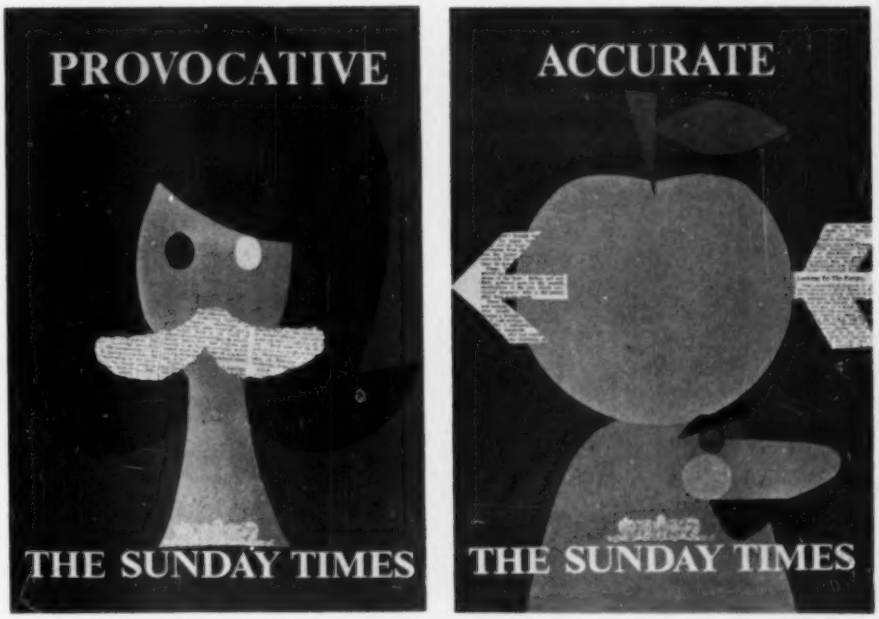
Unless something of this kind is attempted, confusion will continue and industrialists will remain suspicious and overcautious.

ROY E. HALLSWORTH
Greenacre
Gypsy Lane
Marlow
Bucks

Norbert Dutton replies on behalf of The Society of Industrial Artists:

"While the SIA engages in numerous activities its primary aim is the establishment of professional status for designers; and this, which seemed a Utopian ideal when the society was founded, has now been largely achieved. It was clear from the outset that such a project could be attempted only by a single body representing the design profession as a whole, and not by two or more societies acting jointly. The degree of status that designers today take very much for granted derives largely from the prestige attained by the SIA as their representative organisation. The group structure of the SIA allows for corporate action by designers in various specialised fields. But the division into 'artists' and 'designers' has been found in practice to be an oversimplification; nor does it take account of those branches, such as exhibition design and packaging, where two- and three-dimensional work overlaps. Members of the SIA are all equally designers, insofar as they all work for a client and to a brief, and employ basically the same technique whether in the design of a poster or a powered tool.

"The appropriateness of the term 'artist' in the society's title has been extensively debated among its members. But it is recognised that to change it now would jettison the goodwill that the society has achieved, and that two bodies would be less effective than one. Moreover, we are, after all, artists no less than designers: it is the aesthetic element in our work which constitutes our particular contribution. Just as there are other kinds of artists (who practise the 'fine arts') so there are many other kinds of designers (who are primarily engineers). While we recognise – among others – the distinction between 'commercial' and 'industrial' design, we are content to be described as artists. The widespread illusion that artists are necessarily unpractical we are engaged in dissipating."



Six for Sunday
Two of six new posters designed by Patrick Tilley for The Sunday Times *form part of a new promotion campaign.*

Living in luxury
Part of a new show flat, furnished by Trollopes for a new block of luxury flats in Princes Gate, London. The illustration shows one of the smaller flats; the interior was designed by Anthony Cooley of Trollopes' design staff.

BOOKS

The master builders

Peter Blake, Victor Gollancz Ltd, 15s

This is a puzzling and in the end a rather disturbing book. After reading the first two chapters one wonders why exactly it has been written in the slightly arch and somewhat breathless manner of the women's magazines.

Then Peter Blake provides his own clue for

continued on page 75

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guesses at his intended audience. In describing the role Phyllis Lambert played in the choice of Mies van der Rohe to design the Seagram building, he describes Mrs Lambert as one "who had taken several advanced college courses in architecture and related arts". It is then that one realises that the book is intended for the well informed consumer – a class of person who hardly exists in Europe, where to study the arts non-vocationally is considered largely a waste of time. (Argument: language and history can be taught as a discipline, and art history at worst as a method, but to really dig an art discipline from the outside is almost impossible.)

Mr Blake writes with love of his three heroes and he writes with knowledge; but often one suspects his large generalities cover detailed ignorance (especially with regard to political affiliations and complex thought processes). They sweep one on past the difficult bits.

Some of the descriptive purple passages are so unlike the experience of seeing the building, one suspects that he has not been there (eg, to Le Corbusier's Villa de Mondrot). But, nevertheless, he really does communicate the inspirational quality of all Le Corbusier's work.

He is less good on Mies and almost dull on Frank Lloyd Wright. In the Frank Lloyd Wright section one sometimes has the feeling that the author is writing enthusiastically out of habit and almost in spite of himself.

But what I found disturbing was the last chapter, *Prospect*. The prospect is appalling – "background buildings" and "foreground buildings" – a generation of architects thinking in these terms and a generation of potential clients cheering them on.

The city must be the next hero Mr Blake, I am right with you there, but *this* is the sort of woolly theorising that is making our cities uninhabitable.

PETER SMITHSON

Pioneers of modern design

Nikolaus Pevsner, Penguin Books, 5s

The second half of the nineteenth century and the early years of this, represented, in terms of industrial design, architecture and painting, a period of upheaval and unprecedented activity. The whole phase is an historical unit, a time of search and research expressive of the disgust felt by creative thinkers at the comic situation which in this country was epitomised by the exhibition of 1851. What was begun by William Morris was finally determined and given direction by Walter Gropius. Morris is still respected for the socialist doctrine of art which he developed, but it is only part of the story. His idea of art derived from his conception of the mediaeval condition and became historicism. Both he and Ruskin, though for different reasons, condemned the machine: "as a condition of life, production by machine is altogether an evil", and Morris attempted to establish a movement which retained respect for materials and glorified the virtues of the craftsman. But the resulting Arts and Crafts Movement was essentially retrospective and backward-looking, and the true pioneers were those who from the outset stood for machine art. After Morris's death, the partial acknowledgment of the machine and the limited contributions of men like Mackintosh, the initiative passed to the Continent and the US, with Germany as the centre of progress. The final stage was reached with the arrival of Muthesius, Behrens, Sant'Elia, Marinetti and Gropius, when, according to Nikolaus Pevsner, the "genuine and legitimate style of our century was achieved".

The incidental development of the Art Nouveau, a compromise perhaps between Arts and Crafts and the innovations of engineering, encouraged a futile fascination with novelty and any demonstration against the traditional and the conventional. In fact of course neither the Arts and Crafts movement nor Art Nouveau really matter. Both were inevitable reactions perhaps, but they are subsidiary to the Modern Movement which renounced the conservatism of the one and the weakness and self-indulgence of the other to find its own philosophy of self discipline and high integrity.

Dr Pevsner's survey, a revised issue of his earlier book published in 1936 when it was the first of its kind, is still one of the best guides to the work of the pioneers of the Modern Movement, and he succeeds in proving his contention that the Modern Movement was established by 1914 when any serious commitment to arts and crafts was finally repudiated. Unfortunately our approach today has hardly changed; we have been on the same old jag for almost 50 years. Today there is virtually a neo-Art Nouveau as superficial as the original, even if the picture is not quite as black as it was in the mid-nineteenth century, and there is as yet no theory appropriate to a society in which television, electronics, plastics, automation and nuclear power are commonplace terms. The aesthetic approach to these developments uses the same vocabulary as was established in 1912, suitably modified to accommodate fashion's fickleness. But what Reyner Banham calls the "first machine age" is now virtually over; we have entered the second and without the means to express it.

The lesson of the period between Morris and Gropius is not that we should adopt similar solutions to our problems, but that we should approach them with the same spirit of inquiry. We must yet decide for example between faith in science and technology, social service and planning (represented by Muthesius and Gropius) and the romantic, superficial "faith in speed and the roar of machines" (represented by Sant'Elia) – to reconcile the craving for individual expression, such as the "structural acrobatics of the Brazilians", with a social conscience. This is not a time for complacency, it is the beginning of another period of revolution.

ARCHIE MCNAB

Furniture setting

The illustration shows part of the showrooms of Greaves and Thomas Ltd in Bond Street which have recently been redesigned by Dennis Lennon, design consultant to the firm.

Addenda

DESIGN 142/46: the *Rayburn No 1* convector heater is manufactured by Allied Ironfounders Ltd, of which Planet Foundry Co Ltd is a member company.

DESIGN 144/79: Sylvan Press Ltd is the sole distributor of *Graphic Annual 60/61* in this country.

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Alan H. Adams; Brian Adams; Andrew Bain; John Barnes, FSIA; Alan Bednall; Derek Birdsall; David Caplan, FSIA; George Collett, FSIA; Terence Conran, MSIA, Conran Design Group; Anthony Cooley; John Drummond; E. S. Ellis; Colin Forbes; Leslie Gooday, ARIBA, FSIA; W. M. Goslett; Martin Grierson, MSIA; Adrian Heath, ARIBA, MSIA; Jack Howe & Partners; Ursula Howells; David A. Jay; Jock Kinneir, FSIA; Clive Latimer, MSIA; Dennis Lennon, ARIBA; Noel London, MSIA; D. L. Medd; J. F. Parker; A. B. Read, RDI, ARCA; James Reid; Martyn Rowlands, MSIA; Patrick Tilley; Wilkes & Ashmore; Roger Worboys, ARIBA.

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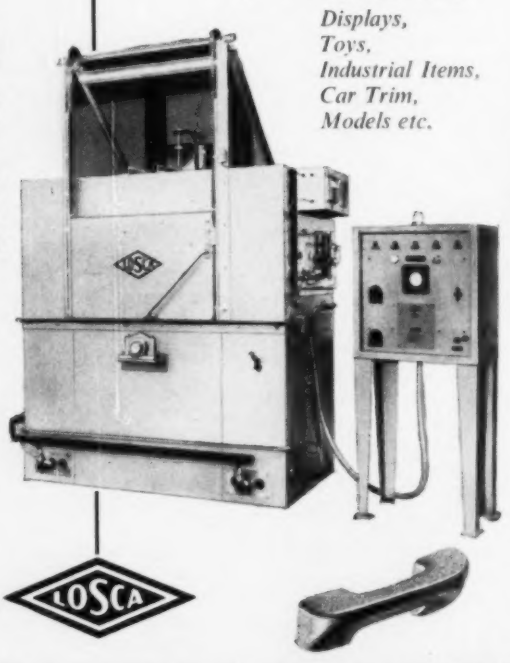

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TOOL DIVISION, WELLINGTON ROAD, WIMBLEDON, LONDON, S.W.19. Telephone: WIMbledon 6301/4

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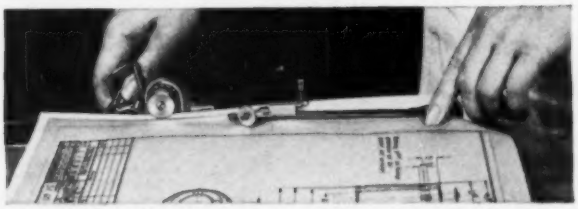

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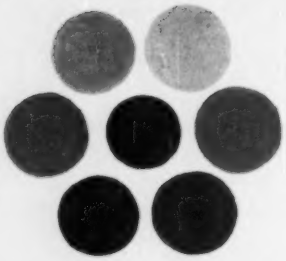

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Regional College of Art Manchester

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City of Manchester Education Committee

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City of Stoke-on-Trent Education Committee
COLLEGE OF ART
Principal: R. H. Marlow, ARCA, FRSA, MSIA.
Required from April 1st, 1961, a full-time Lecturer in Graphic Design. Applicants should hold the ARCA, ATD, or equivalent qualifications. The person appointed will be responsible for organising the Graphic Design section of the Department of Printing, and will be required to teach Graphic Design (including its application to Ceramics), Illustration and Lettering, to full-time and part-time students, up to NDD level. Salary £1,370 – £1,550 Burnham Technical Report. Application forms obtainable from the Chief Education Officer, PO Box No. 23, Town Hall, Hanley, Stoke-on-Trent, to whom they should be returned within 10 days of the appearance of this advertisement. H. Dibden, Chief Education Officer.

City of Bradford Education Committee
REGIONAL COLLEGE OF ART, BRADFORD
Principal: F. T. Coleclough, ATD, FRSA.
Department of Printing. Applications are invited for the post of teacher of Typographic Design in the above department. The person appointed will be required to teach the subject to composing students up to Final City and Guilds level, as well as typography to full time students of Advertising, and to develop the standard of design throughout the department. Salary in accordance with the Burnham Technical Report for Assistants Grade B (£700 – £1,150) with increments for approved industrial experience. Application forms and further particulars from the undersigned. Completed application forms must reach the Principal, Regional College of Art, Bradford 7 within a fortnight of the appearance of this advertisement. A. Spalding, Director of Education, Town Hall, Bradford 1.

London County Council
CENTRAL SCHOOL OF ARTS AND CRAFTS
Southampton Row, wc1
Required in January 1961, a full-time senior lecturer, man or woman, in the Graphic Design Department. Applicants should have experience in all aspects of Graphic Design and Book Production and will be responsible for senior students taking NDD (Special) in illustration and commercial design, and subjects for the Central School Diploma. Salary £1,550 × £50 – £1,750 (man) women's scale slightly lower until 1 April, 1961. Application forms (stamped addressed envelope required) from the Secretary, to be returned by 15th January 1961. Please quote (FE.3a/D/2918/1).

Croydon (County Borough) Education Committee
CROYDON COLLEGE OF ART
Principal: J. Marchbank Salmon, MSIA, DA (Edin)
Owing to the expansion and reorganisation now made possible by the removal of the College to its new building, a number of new appointments of both Senior and Assistant staff are being made and applications are invited from suitably qualified persons for the following Senior Posts commencing on 1st April 1961 (unless otherwise stated).
1. Head of the Department of Fine Art Grade II. 2. Senior Lecturer in Drawing and Painting. 3. Head of the Department of Graphic Design and Printing Grade II. 4. Head of the Department of Dress, Textiles and Ceramics Grade II. 5. Lecturer in Ceramics (to commence 1st January 1961 or as soon thereafter as possible). The salaries for the above are in accordance with the Burnham F.E. Scale as follows: Head of Department Grade II £1,600 × £50 – £1,800 per annum. Senior Lecturer £1,550 × £50 – £1,750 per annum. Lecturer £1,370 × £35 – £1,550 per annum. Extra London Allowance is payable in each instance.
Applications are also invited for the following appointments to commence on 1st January 1961 or as soon thereafter as possible, in the Department of Graphic Design and Printing.
(i) Assistant Lecturer Grade B in Graphic Design to teach up to NDD (Special) standard and in non-Diploma courses. Candidates should be suitably qualified, and commercial or industrial experience would be considered essential. Some teaching experience would be an advantage but would not be obligatory. (ii) Assistant Grade A to teach printing Compositors' Work up to City and Guilds Final standard and also to assist in classes for Typographical layout if possible. Industrial experience is essential, and some teaching experience, though not essential, would be considered an advantage. Salaries: Grade B £700 – £1,150, Grade A £520 – £1,000.
Additions to all the above scales in respect of training, industrial experience, teaching service, together with extra London allowance will be made where appropriate. Further information for each of these posts and a form of application may be obtained from the Chief Education Officer, Education Office, Katherine Street, Croydon, and when completed should be returned within fourteen days of the appearance of this advertisement to the Principal, College of Art, Fairfield, Croydon.

City of Birmingham Education Committee
COLLEGE OF ART AND CRAFTS
Principal: Meredith W. Hawes, ARCA, ARWS, NRD.
SCHOOL OF GRAPHIC DESIGN. Head of School: W. H. Price, Dip. FA (Lond.) (Second Advertisement)
Applications are invited for the post of Senior Lecturer in the School of Graphic Design. Salary – £1,500 × £50 to £1,750 per annum. Duties to commence at the commencement of the Summer Term 1961, or as soon as possible. Candidates should have both industrial and teaching experience. Application forms and further particulars are obtainable from the Principal, College of Art and Crafts, Margaret Street, Birmingham 3. Closing date: 20 January 1961. E. L. Russell, Chief Education Officer.

EDINBURGH COLLEGE OF ART
Silversmith required to take charge of the teaching of Silversmithing and Jewellery. The post may be either part-time (approximately 16 hours per week) or full-time. The full-time post is superannuated. Application forms and conditions of appointment can be obtained from the Secretary, Edinburgh College of Art, Lauriston Place, Edinburgh 3, to whom completed applications should be returned not later than 10 January 1961.

EDINBURGH COLLEGE OF ART
Textile Designer required to take charge of the Textile and Weaving Department. The post may be either part-time (approximately 16 hours per week) or full-time. The full-time post is superannuated. Application forms and conditions of appointment can be obtained from the Secretary, Edinburgh College of Art, Lauriston Place, Edinburgh 3, to whom completed applications should be returned not later than 10 January 1961.

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EXHIBITION and Display Designer required for work in this country and abroad. Apply Leslie Gooday ARIBA, PSIA, BELgravia 5221/2.

classified advertisements continued on page 80

CLASSIFIED

advertisements continued from page 79

A MIDLANDS MANUFACTURING FIRM needs a Designer whose basic training has included light production engineering. Higher National Certificate standard in engineering and sound Drawing Office experience required. A knowledge of electric motor production is an advantage but not necessary. The applicant should have managerial ability so that at some future date he can take over a department. Please send full details of education and experience to Box No 480, Design, 28 Haymarket, sw1.

YOUNG GRAPHIC DESIGNER required by design unit attached to Advertising Agency. Work entails packaging, house styling, literature, small displays, etc, on an interesting range of consumer and technical accounts. A high standard of design and presentation is essential. Write or 'Phone W P S Design Associates, Thavies Inn House, Holborn Circus, London EC1. Tel: FLEET Street 4020.

Commissions and contracts wanted

YOUNG DESIGNER, shops interiors, exhibitions, furniture, wishing to establish himself, requires commissions. Association with designer considered. Box No 482, Design, 28 Haymarket, London sw1.

Printing and publications

TECHNICAL BULLETINS Advance Information Sheets, Data Sheets, Manuals, Parts Lists, Price Lists, Illustrated Technical Reports, Diagrams. By direct image-litho, dia-litho and photo-litho up to size 19 inch × 13½ inch. Latest Typewriter Faces, Highest Quality, Speedy Service. Ask for Samples. Expedite Multiprint Limited, 51 Tothill Street, Westminster sw1. ABBEY 3213/4.

ISP OF HIGH WYCOMBE. Designers and printers of catalogues and brochures, have installed yet another letterpress printing machine to meet increasing demand. Head Office and Works, Publicity House, 93 West Wycombe Road, High Wycombe, Bucks. Telephone: High Wycombe 3341/2.

Miscellaneous

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TRANSPARENCY SERVICE for artists, craftsmen and collectors. "Carry your collection in your pocket!" "Micran", 19d Netherhall Gardens, NW3. SWI. 5154.

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Prototypes and model making

FOR EXHIBITION STANDS and animated light displays, architectural and visual planning models, prototype design and development – consult: John Evans and Associates, East Gate House, Chenyne Walk, Northampton.

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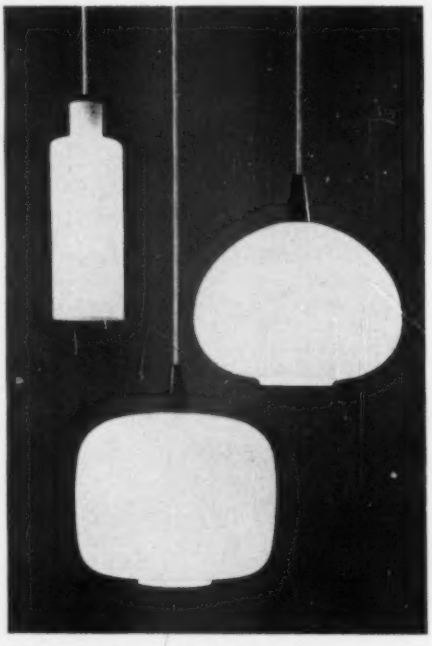

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Part of a range of lighting glassware. The range was designed by Clive Latimer for Webbs Crystal Glass Co Ltd. Mr Latimer was recommended to the firm by the CoID's Record of Designers.

Manufacturers and others wanting design consultants or staff designers can apply for a short list (requirements must be stated in some detail) to the Record of Designers, CoID, 28 Haymarket, London sw1, or to the CoID, Scottish Committee, 46 West George Street, Glasgow c2.

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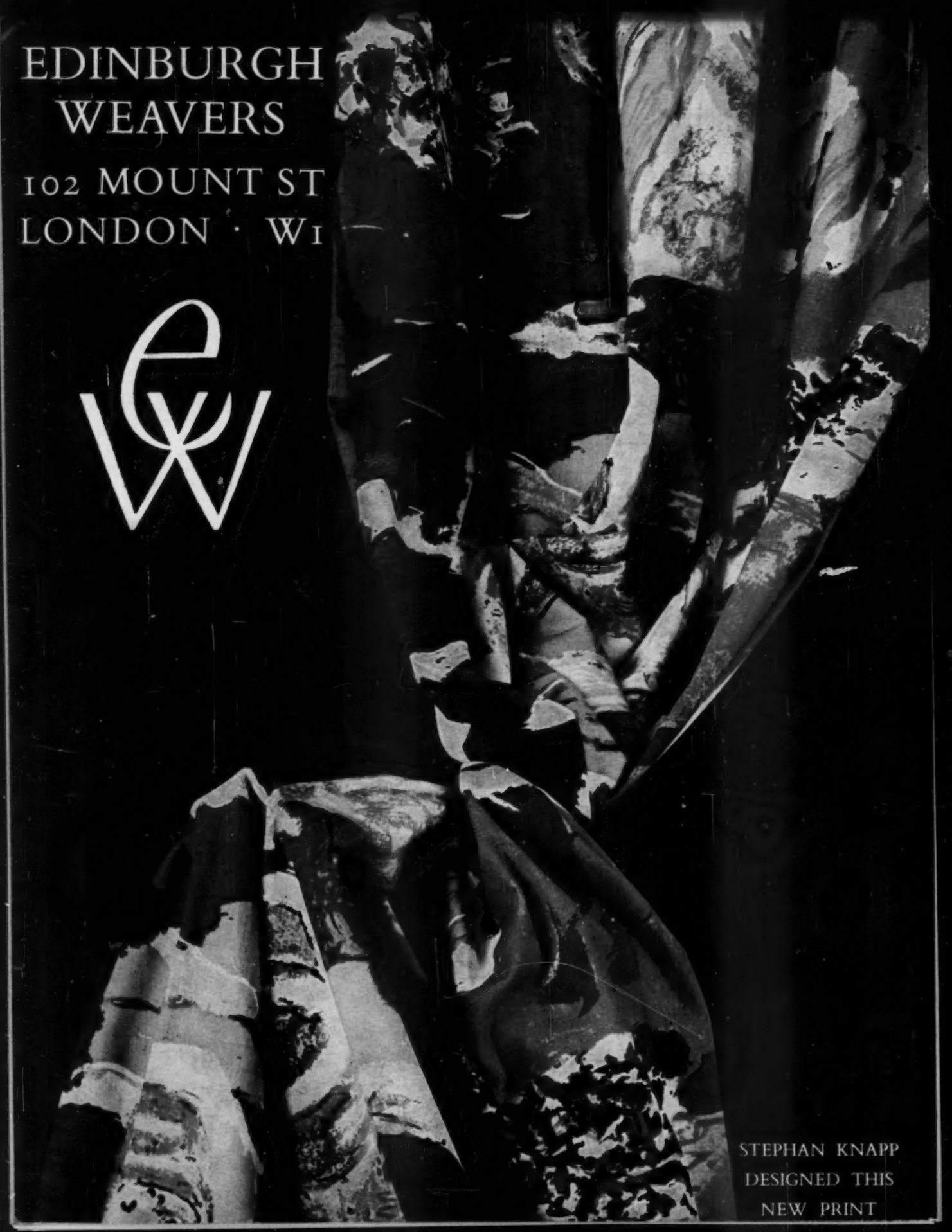
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